SMALL STATES *in the* GLOBAL ECONOMY

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with a foreword by

RT HONOURABLE OWEN ARTHUR, PRIME MINISTER OF BARBADOS



COMMONWEALTH SECRETARIAT
WORLD BANK

Small States in the Global Economy



COMMONWEALTH SECRETARIAT

Small States in the Global Economy

Background papers presented to the Commonwealth Secretariat/World Bank Joint Task Force on Small States

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Foreword

The papers included in this book were presented to the Commonwealth Secretariat/World Bank Joint Task Force on Small States as background papers to facilitate its work. They were discussed at two high-level conferences organised by the Task Force in St. Lucia in February 1999 and London in February 2000. I believe that their publication will help inform continuing analysis and debate on small states issues in the countries themselves, and in multilateral and other institutions that provide support and influence their development.

The Report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States, *Small States: Meeting the Challenges in the Global Economy* was a landmark document. For small developing states, it marked for the first time a recognition by the international community of the special economic challenges that such states face in today's increasingly global economy. And it set out both a conceptual framework and agenda for addressing these challenges – for the states themselves and for the international and other organisations that provide them with assistance and influence their development.

The timeliness and importance of this initiative by the Commonwealth Secretariat and the World Bank for small states cannot be emphasised enough. We are now at a crossroads where the increasing trend towards globalisation could overwhelm the economies of many small states unless their special concerns in terms of vulnerability and transitional problems are taken into account. Small states have not only recognised these emerging trends but have been making determined efforts to chart new courses for their imperilled societies. They have been engaged in devising coherent strategies for integrating their economies with the larger trading blocs and with the new global trading system. They have been re-engineering their domestic economies to make them follow export-propelled policies; to create the conditions for sustainable growth based on sound macroeconomic policies; and to foster an environment within which market-driven solutions can be found at all levels of the economic system. They have also been steadfastly building regional economic integration as a means of creating economies of scale.

But all the efforts at domestic adjustment and regional co-operation alone will not suffice. The changes involved in globalisation are so profound that the implications for small developing countries cannot be addressed

only by the pursuit of conventional economic policy. The Task Force Report and the intellectual work that went into its production has provided the international community with a new development paradigm that addresses the challenges posed by efforts to successfully integrate small states into the new global economy. The work of the Task Force has also challenged us to devise new solutions to tackle the key issues of volatility, vulnerability and natural disasters; transition to the changing global trade regime; strengthening capacity; and the new opportunities and challenges of globalisation.

I believe this book will be of real value to those working on the issues identified by the Task Force and to all those who are interested in improving the economic prospects of small states throughout the world.

Rt Honourable Owen Arthur
Prime Minister of Barbados

Introduction

This book is about the special problems, challenges and opportunities faced by small developing countries in today's increasingly global economy. The report of the Joint Commonwealth Secretariat/World Bank Task Force on Small States (*Small States: Meeting the Challenges in the Global Economy*, 2000) helped put these issues firmly on the international agenda. This book publishes and brings together for the first time background papers produced in the course of the work of the Task Force and presented at two global conferences that helped frame its conclusions. It is hoped that their publication will help inform continuing analysis and debate as small states themselves and the multilateral and other institutions that provide external support and influence their development address the challenges they face.

The Commonwealth Secretariat and the World Bank established the Joint Task Force on Small States in July 1998. It produced an Interim Report in October 1999, which was welcomed by the November 1999 Commonwealth Heads of Government Meeting in Durban, South Africa. Its final Report was welcomed at the April 2000 meeting of the World Bank/IMF Development Committee.

In the course of its work the Task Force organised two global high-level conferences. The first was in St. Lucia in February 1999, and brought together representatives from 25 small states, academia, the private sector, and bilateral, regional and multilateral development and other organisations. The second was held in London in February 2000, and brought together senior ministerial representatives from 35 developing small states and 45 governments in total, and representatives of 25 multilateral, regional and bilateral organisations. The papers included in this book were presented at these two conferences. Some of the papers presented at the second conference comment on the Task Force's Interim Report, which was published four months earlier. Most of the papers are published as they were presented, but some, like the report on managing catastrophic disaster risks by John Pollner and others at the World Bank, have been subsequently revised; where possible, the most up-to-date version is included. Also included, as appendices, are a summary of the proceedings of the February 2000 conference and the Executive Summary of the Task Force Report, as presented to the World Bank/IMF Development Committee in April 2000.

The papers are organised under six headings.

◆ **Special characteristics and development challenges of small states**
These papers explore the special features of small developing states, features that affect their economic development. The statement by Shahid Javed Burki, the first World Bank co-chair of the Task Force, at the 1999 St. Lucia conference introduces the themes that the Task Force subsequently explored. The two papers, 'Aid, Risk and the Special Concerns of Small States' by Paul Collier and David Dollar, and 'Small States, Small Problems?' by William Easterly and Aart Kraay, look at data about small states and seek to draw out conclusions for their economic development. The first of these papers includes the important finding that small states tend to be seen as more risky by investors, simply because of their size, and that in the right circumstances aid flows are peculiarly effective in counteracting this effect. Another paper in this section, 'Globalisation and Small Developing Economies: Challenges and Opportunities' by Richard Bernal, comments on the Task Force's interim report and explores structural problems of industries in small developing economies and the scope for strategic global repositioning. A key paper produced for the Task Force – 'Small States: A Commonwealth Vulnerability Index' by Jonathan P. Atkins, Sonia Mazzi and Christopher D. Easter – is also included here. The paper was previously published by the Commonwealth Secretariat in January 2000 as *A Commonwealth Vulnerability Index for Developing Countries: the Position of Small States*, Economic Paper 40.

◆ **Management of economic risks in small states**
One of the shared problems of many developing small states is their vulnerability – because of their small size and geographical location – to a range of natural disasters. The report by John Pollner and others at the World Bank focuses on issues and opportunities in the East Caribbean and identifies a range of new ways for governments and the multilateral community to help to mitigate, manage and insure against such risks.

◆ **Impact on small states of the developing world trade regime**
With their historic reliance on trade preferences, and on tax revenues generated by tariffs, the changing global trade regime poses a major challenge for many small states. The four papers in this section explore ways of managing this challenge. The first paper in this section is a report by Peter Tulloch of the WTO Secretariat on 'Small Economies in the WTO', presented to the February 2000 conference in London. This is followed by a 1998 report produced by the Commonwealth Secretariat for the Task Force on 'Trade Policy Implications for Small Vulnerable States of the Global Trade Regime Shift'; a paper by Roman Grynberg describing the

experiences of Pacific Island states with the WTO; and a paper by Liam Ebrill and others from the IMF on the revenue implications of trade liberalisation.

◆ **New opportunities from globalisation**

Globalisation is also bringing new opportunities. In particular better communications, information technology and electronic commerce are opening up new trading opportunities for remote island states. The paper on 'Exploiting Information Technologies for Electronic Commerce and Better Public Sector Management' prepared by Robert Schware and Paul Kimberly for the February 2000 London conference explores how these opportunities can be exploited.

◆ **Issues in the provision of external assistance**

Two issues recurred throughout the work of the Task Force: the special needs of small vulnerable states for external assistance, discussed in the paper by Collier and Dollar included in the first section, and the special problems that such states have in dealing with multiple donors and co-ordinating their efforts. The paper by Wendy Jarvie and John Eriksson, presented at the London conference, explores the second issue, drawing on a review of aid co-ordination carried out by the Operations Evaluation Department of the World Bank.

◆ **Regional and country experiences**

This final group of papers explores approaches that have worked, and the lessons to be learned from experiences in island states in the Mediterranean, the Indian Ocean, the Caribbean and the Pacific. The first two papers, on the experiences of Cyprus and Mauritius, focus on the lessons to be learned from economic successes in these two island economies. The last two explore experience in regional co-operation, in the Caribbean and in the Pacific. The Task Force commended regional co-operation as an effective way to address some of the capacity and economic management challenges in small states.

It is hoped that this publication will help policy-makers in small states and in multinational and other organisations as they continue to address and develop the agenda that the Task Force set out. The Commonwealth Secretariat is continuing its own work in analysing these issues and helping small member states in their development efforts. We encourage all those with comments and views to contact Dr. E. J. Kisanga at the Commonwealth Secretariat. Tel. 00 44 20 7747 6128. Fax: 00 44 20 7747 6203/6235. E-mail: e.kisanga@commonwealth.int.

Special Characteristics and Development Challenges of Small States

Integrating Small States in a Fast-Changing Global Economy[1]

Shahid Javed Burki

Let me spend a few minutes on providing the audience with some information on the reasons that led to the establishment of a joint World Bank/Commonwealth Task Force on Small States. I will then provide a brief overview of the work that has already been done by the Task Force. I will also set out what I think has emerged from the papers prepared, and will pose a few questions for us to keep in mind during this meeting in St. Lucia.

The establishment of the Task Force

The Commonwealth's interest in helping with the development of small states goes back a long time. The Commonwealth Secretariat has done some pioneering work in understanding the economic and social characteristics which distinguish small states. We at the World Bank have also been concerned with the development problems of small states. In the late 1970s, for instance, the Bank proposed a small state bias in allocating International Development Association (IDA) resources – a proposal that was accepted by the IDA deputies in negotiating the fifth replenishment.

It is not surprising, therefore, that when a delegation headed by Prime Minister Owen Arthur visited the World Bank on 10 July last year, his proposal for establishing a joint World Bank/Commonwealth Secretariat Task Force on Small States was quickly accepted by our president, James Wolfensohn. Prime Minister Arthur spoke in particular about three problems faced by small states: (i) economic vulnerability; (ii) a sharp decline in official development assistance; and (iii) increasing pressures as a result of the rapidly evolving global trading system under the aegis of the World Trade Organisation (WTO).

The progress made by the Task Force

The Task Force met for the first time in Washington in October 1998 under the joint chairmanship of Sir Humphrey Maud and myself. At this meeting, we decided to organise an advisory group drawn from people

[1]This paper was presented as opening remarks at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in St. Lucia in February 1999.

who have special expertise in small states, as well as international institutions to which the small states must look for help. It was also decided to commission a series of papers that would assist in the work of the Task Force. The terms of reference of these papers were discussed at the second meeting of the Task Force held in London in December 1998. Following the London Meeting, I visited Geneva to discuss the work of the Task Force with senior officials from WTO and UNCTAD.

Following the St. Lucia deliberations, it is our intention to write a short paper, which will be presented to the Development Committee at its April meeting. Further discussions will be held during the summer with a number of international institutions before this report is finalised for submission to the Commonwealth ministers and to the Development Committee in the autumn.

The emerging theme

The background papers prepared for this conference serve as a useful background for our deliberations. I identified at least eight conclusions or threads:

- The economic work done by the World Bank staff suggests that small states have a higher per capita income and higher volatility of income than large states. This does not suggest that small size does not pose a disadvantage. Small size implies high per capita costs of providing public goods and limits the possibility of exploiting economies of scale within the domestic economy. This disadvantage has been compensated by the advantages of greater trade openness in small states.
- The paper by the Commonwealth Secretariat suggests that the advantages from trade enjoyed by small states may have resulted in part from the preferential access given to them under various arrangements. There is a problem, however. The evolving trading system threatens to erode the preferences that have worked in favour of small states. These states are now vulnerable to the adverse consequences of trade opening as this new trading system evolves.
- The paper on vulnerability establishes convincingly that in looking at small states we have to look beyond conventional indices of development such as GNP/GDP measurements. A vulnerability index of this type developed in the paper should guide the international community in two ways: GNP-based thresholds need to be reinforced by a vulnerability index to establish access to official finance by small states. And, in applying trading rules, the international community must take cognizance of the vulnerability of small states.

- A theme that runs through most of the papers prepared for this conference, sometimes explicitly and at other times implicitly, is that developing countries, including small states, must take full advantage of the rapid globalisation of trade and finance. They cannot opt out of the system nor expect long-term preferential support from the industrial world. However, as the current debate on the banana regime demonstrates, it would be both imprudent and irresponsible to force adjustments on small states without recognising that there are larger costs associated with making this transition. One of the unexplored areas from the perspective of small states is the cost of transition – how long it should last and how it should be met. I hope that this conference will help us to find some answers to these important questions.

- An example of the globalisation of finance and of how small states would benefit from it is provided in the World Bank paper on disaster insurance. It suggests that rapid developments in global finance have made it possible to think in terms of developing new instruments that would bring together the public and private sectors to cope with natural disasters, to which small states are especially vulnerable. The purpose of this financial instrument engineering is to spread risks, reduce the volatility in risk premiums and improve disaster management. The World Bank is working on identifying its role in this important area.

- I hope that one product of the work done by the Task Force will be to challenge other international institutions of great consequence for the small states to develop responses similar to those being worked upon in the World Bank. These responses should not only address the problem of transition to which I have already referred. They should also take cognizance of the special circumstances of small states.

- It would be helpful to recognise that ultimately it is the strength of domestic policies that counts in promoting development. This is the main conclusion of another World Bank paper. While the paper recognises that, for a variety of reasons, foreign aid does not reward those who have followed good policies, I would like to suggest that the future may well be different. There has been a precipitous decline in the level of aid in recent years. On average, 21 OECD (Organisation of Economic Co-operation and Development) countries devoted 0.22 per cent of their GNP to development assistance in 1997, down from 0.25 per cent a year earlier. Total overseas aid dropped from $55 billion in 1996 to $48 billion in 1997. Aid from the G-7 group of big, rich countries has dropped by almost 30 per cent in real terms since 1992. The USA now donates less than 0.1 per cent of its GNP. Small states must therefore rely increasingly on a combination of their savings and

private external flows – foreign savings – to finance development. How this could be done in a credible way is suggested in the country studies prepared for the Task Force on Cyprus and Mauritius.

- Although official development assistance is likely to be less of a factor in financing development in developing countries, one of the World Bank papers suggests that IDA flows can influence perceptions of risk on the part of the sources of private external flows. Official development flows, good domestic policies and flow of foreign savings are the elements of a virtuous cycle that we should set in motion in the small states. How this could be done is our other question, and one that I would like to pose to the participants in this conference.

Conclusion

I do not know how much agreement we will be able to find on these eight threads. I have simply presented them this morning to provoke discussion.

Furthermore, as I stated earlier, states have to stay fully involved in the process of globalisation and become full partners in the global financial and trading system. At the same time, however, there will be a period of time during which this transition will take place. This transition period will require the adoption of prudent policies. It will also need support from the international community. This task will have to be done on a case-by-case basis and on a country-by-country basis. How long this period of transition should last, what kind of policies should be adopted by countries making the transition, how the effort to change can be supported by the international community – these are some of the questions we should ask ourselves during our deliberations.

An example of the approach to the problem of transition is the Bank's very flexible approach towards graduation – graduation from both IDA and IBRD (International Bank for Reconstruction and Development). As a result of these discussions and the work of the Task Force, I hope we can persuade other organisations to be equally flexible in the application of their policies.

There is a great deal of ground to be covered today and tomorrow. But, with common understanding and goodwill, we can cover the ground quickly without stumbling. It is in this spirit that my colleagues from the World Bank and I are participating in this discussion.

Aid, Risk and the Special Concerns of Small States[1]

Paul Collier and David Dollar

Introduction

Large-scale financial aid can help developing countries grow and reduce poverty, but only if they pursue sound economic policies – that is the main finding of the World Bank's recent study, *Assessing Aid*. In this paper we look specifically at the issue of aid to small states, and ask to what extent the above message needs to be tailored to address their particular needs and concerns.

In the next section we look at the issue of policies and growth in small states, and show that the same broad policies that work for large countries also work for small ones. The details of specific policies (fiscal policy or exchange rate management) will differ, but the basic ingredients for successful growth are the same in small states and large.

Section 3 then revisits some of the main findings on aid, policies and growth. There is no evidence that small states are different in this regard. The evidence is that aid only has a large effect on growth in a good policy environment. Where small states are somewhat different is in the allocation rule for providing assistance to them. In the case of large states, aid actually declines as one moves from mediocre to good policy (the opposite of what should happen if aid is efficiently targeted to poverty reduction). For small states, there is simply not much relationship at all between aid and policy. Poor policy countries and good policy countries get the same amount of aid on average, after controlling for poverty and population. Small states tend to get more aid per capita than large ones, and have not experienced a decline in aid in the 1990s, as have large states.

In section 4 we develop a new line of research, looking at the effect of aid on foreign direct investment (FDI). We distinguish between an indirect effect of aid on investors' perception of riskiness, and a direct effect of aid on FDI after controlling for perceived risk. This analysis is particularly relevant to small states. It turns out that perceived riskiness (using the

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in St. Lucia in February 1999. The authors would like to thank Charles Chang for excellent research assistance.

Institutional Investor risk rating) reacts to policy fundamentals. After controlling for policy and other characteristics, small states are perceived to be far more risky than large ones. On the other hand, aid reduces perceived risk, but only in countries with good policy. Put simply, a small country with good policy and 3 per cent of purchasing power parity (PPP) GDP in aid has the same risk rating as a large country with similarly good policy and 2 per cent of PPP GDP in aid. Thus, an extra percentage point of PPP GDP in aid offsets the disadvantage that small states face in attracting investors. Our interpretation is that the aid helps increase confidence in the good policies, and that this is particularly important for small countries.

We also estimate an equation for foreign direct investment. The risk rating is important because it actually influences flows. After controlling for risk, small states do not experience a significant disadvantage in attracting flows (their disadvantage is in their perceived riskiness). Also, after controlling for risk, aid increases FDI, especially in a good policy environment. Thus aid has both an indirect effect (through perceived risk) and a direct effect on foreign private flows.

This new work sheds some additional light on the main findings of *Assessing Aid*. One reason why donors may be giving less aid to countries with good policy is a sense that they can attract private flows. However, it is exactly in these environments that aid is important because it 'crowds in' private investment. The effect is especially important for small states, because of their disadvantage in attracting private investment. Thus, aid has a particularly important role to play in small states, but it can only play that role effectively if countries are pursuing sound policies.

Growth and policies in small states

Rates of growth of real per capita GNP are diverse, even over sustained periods. For 1960–80 we observe, for example: India, 1.4 per cent per year; Egypt, 3.4 per cent; South Korea, 7.0 per cent . . . Between the 1960s and 1970s, Indonesia's growth increased from 3.9 to 7.5 per cent . . .

I do not see how one can look at figures like these without seeing them as representing possibilities. Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's? If so, what, exactly? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.

Robert E. Lucas, Jr. *On the Mechanics of Economic Development*

As noted in this quotation from Robert Lucas, growth rates of developing countries vary enormously. Lucas cites examples of large countries, but one could make the same point with examples of small states. In the

1990s, for example, we observe São Tomé and Príncipe, and Comoros growing at about -2 per cent per annum, while St. Lucia's per capita income has expanded at about 3 per cent per annum and Mauritius's at 4 per cent. Sustained over a decade or more, such differences in growth rates lead to large differences in real per capita income and the standard of living.

How to explain these widely differing growth performances? It was once thought that the key factor holding back poor countries was a lack of savings and foreign exchange for investment. Part of the initial rationale for foreign aid was to help countries overcome a 'savings gap' to finance necessary investment and a 'foreign exchange gap' so that imported machinery could be the cornerstone of that investment. Development agencies worked with a 'two gap' model that made imports and investment in physical capital the driving force of growth. The role of aid in promoting growth was clear, since aid can help fill both gaps.

The slow stagnation and sudden collapse of the Soviet system of central planning, which was the intellectual father of 'gap thinking' and development planning, made clear that investment alone cannot guarantee growth. In the 1990s the focus of theoretical and empirical work on growth has gone deeper. Emphasis has shifted from investment to incentives. That is, from capital to the underlying institutions and policies that promote growth by encouraging efficient investment, by supporting human capital development and by facilitating technological advance.

What are the conclusions of this new growth literature?

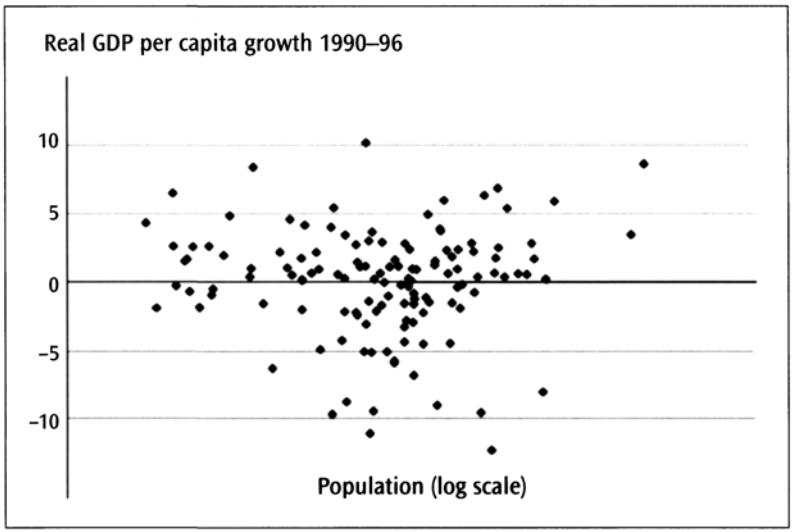
A stable macroeconomic climate is crucial. High inflation is bad for investment and growth (Fischer, 1993). Similarly, large fiscal deficits hold back growth (Easterly and Rebelo, 1993). An outward orientation and a reasonable environment for international engagement are essential; most trade liberalisations accelerate growth (Sachs and Warner, 1995).[1] Fiscal, monetary and trade policies show whether a country is well managed at the macroeconomic level; there is plenty of evidence that good macroeconomic management provides a fertile environment for growth.

Good institutions and economic management are also needed at the microeconomic level. The strength of private property rights and the rule of law and the quality of the civil service affect long-term growth (Knack and Keefer, 1995). Similarly, corruption in the public bureaucracy is bad for growth (Mauro, 1995). The empirical growth literature has also looked

[1]All three of these studies consider whether good policies bring about growth or growth spurs good policies, and conclude that policy reform leads to more growth.

at the question of whether size matters, and has generally found that growth rates are uncorrelated with population (Fig. 1). Still, this leaves open the question of whether the fundamental determinants of growth are the same for small and large economies, the question to which we turn in this section.

Figure 1. Growth and Population in a Cross-section of Countries



For this purpose we use as a measure of the overall quality of the institutions and policies – in terms of providing incentives for efficient accumulation and growth – the Country Policy and Institutional Assessment (CPIA) of the World Bank. It rates countries on 20 specific aspects in four broad areas: (1) macroeconomic policy; (2) structural measures such as trade policy; (3) equity and safety net policies; and (4) public sector management and economic governance (including issues of corruption). This measure has the advantage of being available for a large number of countries.

Collier and Dollar (1999) have shown that this measure of policy is strongly related to growth in the 1990s. A similar picture emerges if we look at the relationship for large and small states separately. For much of the statistical work in this paper, we use as a cutoff for 'small states' a population of five million or less. This cutoff leaves us with a large enough number of countries to do robust statistical analysis. For a number of the key results, we show that the results are the same if a lower cutoff of two million or one million is used. Simply regressing growth in the 1990s on

the CPIA measure and regional dummies yields the relationship in columns 1 and 2 of Table 1. For both small and large countries separately, there is a positive relationship between CPIA and growth, and the coefficients for small countries and large countries are not statistically different. This simple approach allows us to get the maximum number of observations (in the case of small countries, 60), but it is not totally satisfactory because there are other variables that one would want to put into the growth regression, and there are also a number of large outliers with extremely high or low growth that may be driving the results. In columns 3 and 4 we add initial income (usually included in growth regressions), remove outliers with growth in the 1990s above 6 per cent per annum or below –7 per cent per annum (mostly crisis or war-torn countries), and also drop countries for which we do not have aid data (to maintain comparability with the regressions in the next section, in which we introduce aid).

Table 1. Dependent Variable: Growth Rate of per capita GNP

Method	OLS Cross-section	OLS Cross-section	OLS Cross-section	OLS Cross-section
Time period	1990–96	1990–96	1990–96	1990–96
Initial Income	–	–	.12	–.74
			(.13)	(1.27)
Policy	1.2	1.8*	1.6**	1.6*
	(1.51)	(4.02)	(2.62)	(5.01)
N	60	74	36	56
R2	.52	.55	.53	.56

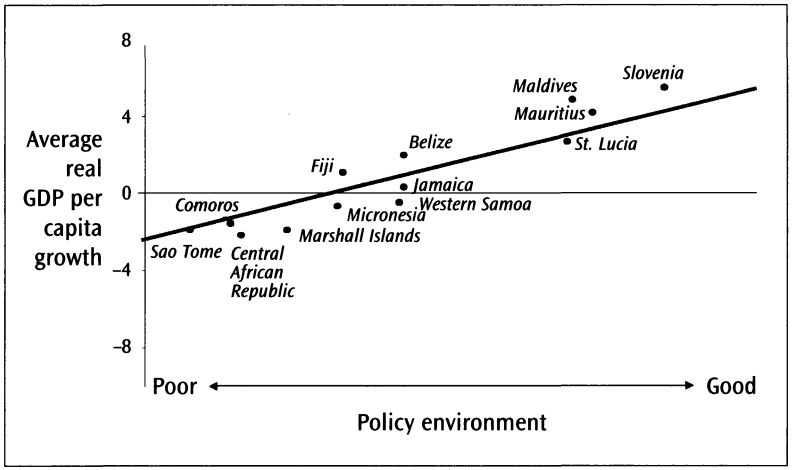
*Significant at the 1 per cent level.

**Significant at the 5 per cent level.

Note: t-statistics in parentheses. Regional dummies included.

What is striking in columns 3 and 4 is that the relationship between policy and growth is exactly the same for small countries and large countries, and in both cases the relationship is statistically significant. For all of the regressions in this paper, we scaled the policy variable to have zero mean and a standard deviation of one, so that the coefficients have a simple interpretation. A country that is one standard deviation above the mean in terms of policy will grow 1.6 percentage points per year faster, other things being equal. This relationship is graphed in Figure 2, and some specific country examples are highlighted. There are small countries with poor policy that have performed badly (São Tomé and Príncipe); small countries with mediocre policies and performance (Western Samoa); and small countries with good policies and good performance (St. Lucia). The

Figure 2. Policies and Growth in Small Countries in the 1990s



specific ingredients that go into 'good fiscal policy' for small and large states may differ, but the basic recipe for successful development is the same for large states and small.

We also looked at the average quality of policy for countries with different populations (Table 2). The mean, median and standard deviation of the CPIA measure is virtually identical for countries with a population of less than five million and those with a larger population. There is a little more variation in the means if we distinguish finer groupings, but no clear relationship between size and policy. The 24 countries with a population of less than one million have an average CPIA of 3.14; the 11 countries with populations between one and two million, 3.88; and the 27 countries with population between two and five million, 3.29.

Table 2. Policy Index

	Mean	Median	Standard Deviation	N
Pop. < 1m	3.14	3.03	.67	24
1m < Pop. < 2m	3.88	3.88	.53	11
2m < Pop. < 5m	3.29	3.50	.76	27
Pop. < 5m	3.34	3.38	.73	62
Pop. > 5m	3.35	3.45	.72	74

Thus, our first conclusion is that small and large states are similar in that

some have good policy and some have poor, and these policies affect growth rates just as they do for large countries. In a related paper for this conference, Easterly and Kraay show that small states have greater variance in their growth rates over time, suggesting that they are more susceptible to external shocks – an issue that we will return to later. Here our point is that the same policies that lead to long-term growth in large states will, by and large, also do so in small states.

Aid and growth in small states

One of the main points in *Assessing Aid* is that financial assistance does have an impact on growth, poverty reduction and improvements in social indicators in the developing world – but only when the developing country has good economic policy and institutions. Earlier work (Boone, 1994) found no relationship between aid and growth, but Burnside and Dollar (1997) found that the picture changed if one distinguished among aid recipients on the basis of the quality of their policies. This was evident if one simply divided countries on the basis of economic policy and looked at the relationship between and aid and growth in the two groups separately. For countries with good policy, those with large amounts of aid grew significantly faster than those with small amounts of aid (Fig. 3). This was not the case for the poor policy countries – as evidenced both in cross-sections and in time series of individual countries. Among smaller states, Mauritania is an example of a country that received a large amount of aid but achieved virtually no increase in income (Easterly, 1997). If aid were as effective in poor policy environments as in good policy ones (as predicted by the two-gap model), then Mauritania should have reached middle-income status, when in fact its per capita income has stagnated at the same level for a long time (Fig. 4).

Here we examine whether there is any reason to think that the story is different for small states. Table 3 shows the cross-section growth regression with aid added to the picture. The equation includes policy, aid receipts relative to GDP and aid interacted with policy. It is this latter interaction that captures the notion that the impact of aid depends on the quality of the policy environment. Across all countries in the sample there is a significant positive coefficient on the aid x policy term. When the sample is divided between small countries and large ones, the coefficient on the interactive term is about the same for small countries and for large ones. There is not much statistical significance to the estimate for small countries, which largely reflects the fact that there are only 36 countries in the regression. The important point is that there is no evidence to think that aid works irrespective of the policy environment in small countries.

Figure 3

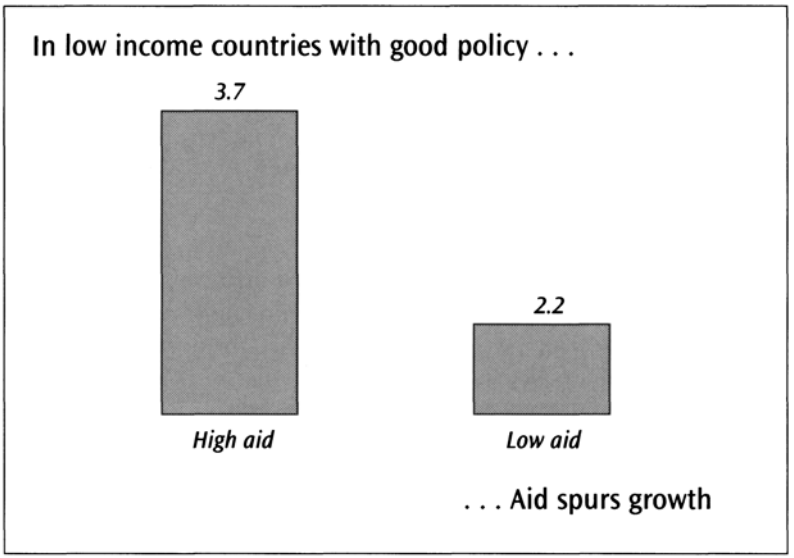


Figure 4. Mauritania: Gap between Aid-financed Investment Model and Reality

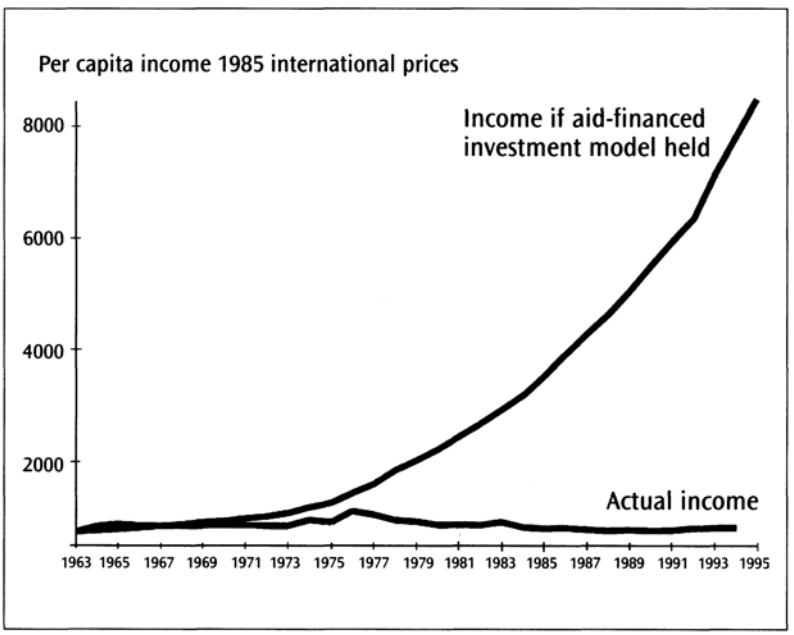


Table 3. Dependent Variable: Growth Rate of per capita GNP

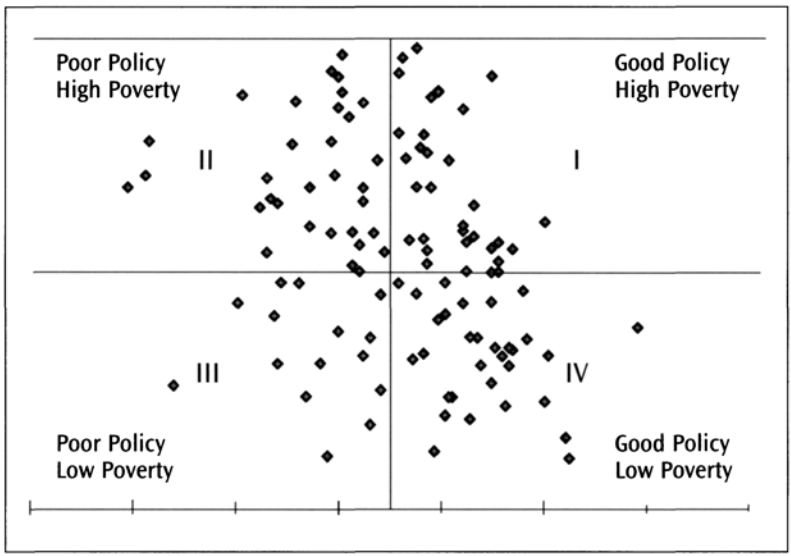
	Full Sample	Pop. < 5m	Pop. > 5m
Method	OLS Cross-section	OLS Cross-section	OLS Cross-section
Time period	1990–96	1990–96	1990–96
Initial Income	–.52	.60	–1.47**
	(1.30)	(.34)	(2.54)
Policy	1.06*	.97	1.42*
	(3.73)	(1.41)	(4.08)
Aid/GDP	–.28**	.13	–.49**
	(1.71)	(.28)	(2.43)
(Aid/GDP) x Policy	.45*	.31	.39**
	(2.66)	(.97)	(2.32)
N	92	36	56
R^2	.54	.55	.66

*Significant at the 1 per cent level.
**Significant at the 5 per cent level.
Note: t-statistics in parentheses. Regional dummies included.

In light of the findings on aid, policies and growth, Collier and Dollar (1999) show that – under certain assumptions – the allocation of foreign aid that has the greatest impact on poverty reduction will depend on how poor a country is and the quality of its policies. Figure 5 categorises countries on the basis of poverty (proportion of the population who live on less than $2 a day) and of the CPIA measure of policy. If we divide the countries into four quadrants, we can say that aid will have its greatest impact on poverty reduction in quadrant I, countries that have mass poverty and above-average policies for the developing world. Because of a world-wide trend toward economic reform in the 1990s, there are 32 such countries. Nearly 75 per cent of the world's poor live in countries in this quadrant. Nine of the countries in quadrant I are small (with populations less than 5 million): Maldives, Cape Verde, Guyana, Botswana, Namibia, Lesotho, Mauritania, Mongolia and Kyrgyz Republic. (For some small countries with good policies – such as Slovenia, Grenada, Bhutan – we do not have good poverty data, so that there may be others that belong in this group.)

There are also countries with good policies, but relatively little poverty (quadrant IV). The evidence is that aid works in these environments, but there is less work for it to do. In quadrant II there are countries with a high level of poverty but also with weak policy regimes. Clearly, there is a need to help these countries. However, in these environments providing

Figure 5. Poverty and Policy, 113 Developing Countries, 1996



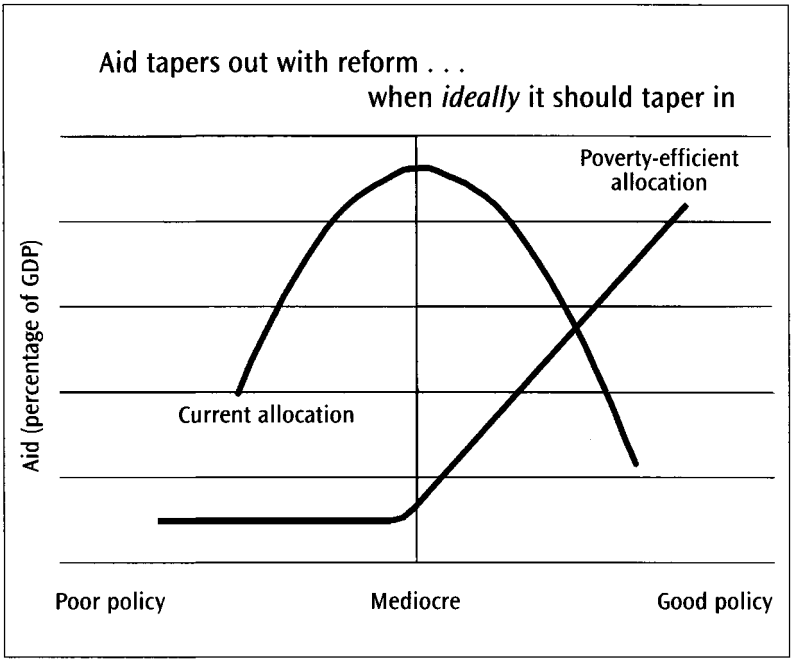
large amounts of finance has not resulted in poverty reduction, so that the conclusion of *Assessing Aid* is that we need to try new approaches, focusing on policy reform, capacity-building and innovative techniques such as channelling aid through NGOs.

The actual allocation of aid in 1996 was quite different from the allocation that is estimated to maximise poverty reduction. The 'current allocation' line in Figure 6 controls for poverty level and for population. It answers the question: how did donors in 1996 treat countries that were the same in terms of poverty and population but differed in policies? The answer is that aid increased as one moves from countries with terrible policies to ones with mediocre policies, and then tapes off as one moves into the truly good policy realms. That is, countries such as Uganda, Ghana, Vietnam and Ethiopia received less aid per capita than otherwise comparable countries with weaker policies. The 'poverty-efficient' allocation has just the opposite relationship: it should increase between mediocre policies and good policies, other things being equal.

In Table 4 we look at the allocation of aid in the 1990s for small states and large states separately; the dependent variables are aid receipts relative to real PPP GDP.[1] The allocation rules are broadly similar. Within each

[1]The aid data come from Chang, Fernandez-Arias and Serven, 1998. They combine official grants with an estimate of the grant component of all official loans.

Figure 6. Donor Countries, Poverty and Policies



group, the ratio of aid to GDP declines with population and increases with poverty. (For small states there is significant curvature: as poverty increases, aid increases but at a diminishing rate.) Both small and large states evidence a quadratic relationship between aid and policy, which is best explained graphically (Figure 7). Controlling for poverty and population, the ratio of aid to GDP rises as one moves from poor policy to mediocre, and then declines. There are two important differences between the allocation of aid to small countries and that to large countries. First, a look at the regressions in Table 4 will reveal that the quadratic curvature for large countries is very significant statistically. As we move from mediocre to good policy realms, aid really has the 'wrong' relationship with policy, and significantly so. In the case of small countries, on the other hand, there is no significant relationship between aid and policy. While there is some slight curvature in the figure, the main point for small countries is that there is no strong tendency to relate aid to the quality of policies. The second obvious point about the aid to small countries is that it is larger on average than the aid to the larger economies. For given policy and poverty, the ratio of aid to GDP is about one percentage point of PPP GDP higher for small countries, compared to large ones.

Figure 7. The Relationship between Aid and Policy

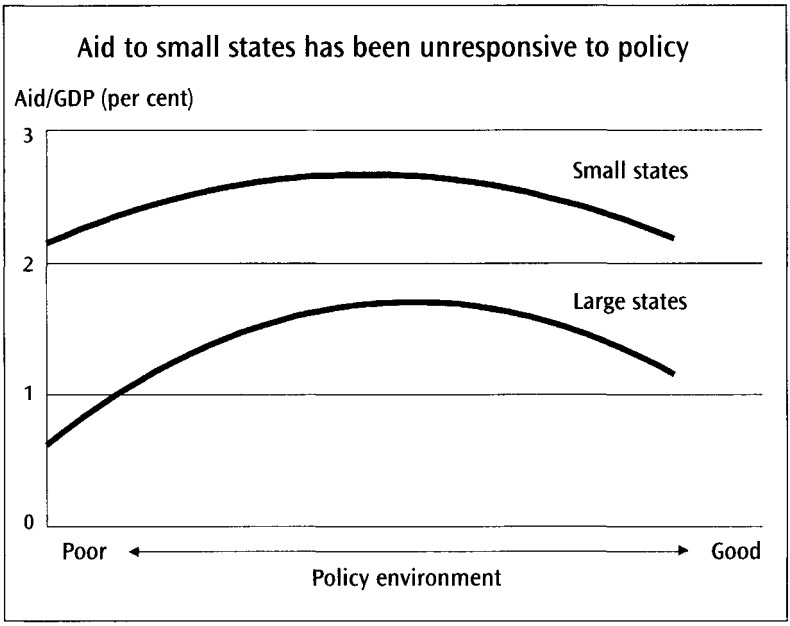


Table 4. Allocation of Aid in the 1990s to Small and Large States

	Pop. < 5m	Pop. > 5m
Ln Population	-.57*	-.44*
	(2.97)	(4.30)
Poverty	112*	39*
	(5.04)	(3.06)
Poverty^2	-522*	-33
	(3.82)	(.34)
Policy	.10	.26**
	(.53)	(2.12)
Policy^2	-.08	-.13***
	(.46)	(1.70)
N	38	64
R^2	.62	.73

*Significant at the 1 per cent level.
**Significant at the 5 per cent level.
***Significant at the 10 per cent level.

Table 5 shows annual aid flows, 1990–96, for a large number of countries, divided into population groups. This tendency to give more aid (per capita or relative to GDP) to small countries is evident. What is also interesting is that the well-known overall decline in aid in the 1990s is concentrated almost exclusively in large countries. Between 1990 and 1996, total aid to countries with populations under five million increased from $5.9 billion to $7.2 billion; to countries with populations between five and 10 million, it increased from $6.7 billion to $7.3 billion; to countries with populations between 10 and 20 million, it increased from $7.1 billion to $7.9 billion; and to countries with populations over 20 million, aid flows fell from $28.4 billion to $21.1 billion.

The last question that we turn to in this section is why do donors continue to give large amounts of money to countries with weak policies. Clearly, there is no single answer. To some extent donors are pursuing objectives other than poverty reduction, such as maintaining ties with former colonies or supporting their own strategic interests. Often these other objectives conflict with channelling aid to countries with good policies (Alesina and Dollar, 1998). But another important reason is that donors hope that aid will induce policy reform. Unfortunately, money has proved to be quite ineffective in generating reform, and there is growing evidence to this effect (Collier, 1997; Mosley, Harrigan and Toye, 1995; Dollar and Svensson, 1998). Among smaller economies, Nicaragua is a good example. Foreign aid increased steadily – reaching 8 per cent of real (PPP) GDP in the early 1990s. However, policy worsened throughout most of this period, only improving slightly at the end (Fig. 8). Despite a series of structural adjustment loans from the World Bank and the IMF, there has been no substantial improvement in policy. Independent accounts confirm that aid to Nicaragua in the mid-1990s neither generated policy reform nor led to much tangible improvement in development indicators (Lopez, 1997). Like many other developing countries, Nicaragua has had problems with political instability and civil war. It is not surprising that policies have remained weak. The point we are making here is that there are several countries that have received large amounts of aid for long periods of time, and yet their institutions and policies have remained weak. We cannot count on aid, as traditionally managed, to bring about a strengthening of policies.

On the contrary, the best evidence is that policy reform is largely determined by domestic institutions and politics, with foreign aid at best playing an auxiliary role (Ranis, 1995; Rodrik, 1996; Williamson, 1994). When countries initiate reform movements, aid can be critical in consolidating these (Sachs, 1994). But aid has not been successful in generating policy reform in unresponsive environments.

Table 5. Official Development Assistance (net)

$US millions											Relative to GDP (%)							
Population <1 m		Pop 1996	1990	1991	1992	1993	1994	1995	1996	Sum 90–96	1990	1992	1992	1993	1994	1995	1996	Avg 90–96
KNA	St. Kitts and Nevis	0.0	7.9	6.9	7.6	10.4	4.3	4.0	7.0	48.1	3.6	3.0	3.1	3.9	1.6	1.3	2.2	2.7
BRB	Barbados	0.3	2.9	2.3	0.3	4.0	–0.9	–0.5	4.5	12.7	0.1	0.1	0.0	0.2	0.0	0.0	–	0.1
GRD	Grenada	0.1	13.8	15.7	12.0	7.1	17.5	10.2	10.6	86.8	4.1	–	–	–	4.4	2.4	2.4	3.3
SYC	Seychelles	0.1	35.9	23.0	19.2	19.3	12.8	13.0	19.0	142.2	–	–	–	–	–	–	–	–
BLZ	Belize	0.2	30.3	20.9	24.7	30.2	29.2	16.2	18.1	169.6	4.6	3.0	3.1	3.5	3.3	1.7	1.9	3.0
DMA	Dominica	0.1	19.5	16.6	12.1	8.4	16.5	24.0	42.9	139.9	8.1	–	–	–	–	–	–	8.1
VCT	St. Vincent and the Grenadines	0.1	15.0	13.9	14.5	11.0	6.7	47.3	26.5	135.0	4.3	3.8	3.6	2.6	1.6	10.1	–	4.3
TON	Tonga	0.1	29.7	19.3	23.8	31.3	35.2	38.8	32.0	210.0	–	–	–	–	–	–	–	–
MLT	Malta	0.4	3.7	21.1	4.7	27.7	42.4	9.3	72.2	181.0	0.1	0.6	0.1	0.7	1.0	0.2	–	0.4
FJI	Fiji	0.8	50.4	44.7	63.4	61.5	40.4	43.3	45.2	349.1	2.0	1.7	2.3	2.1	1.3	1.3	1.3	1.7
LCA	St. Lucia	0.2	12.1	22.4	26.7	25.1	26.8	47.3	38.7	199.2	2.1	3.7	3.9	3.5	3.6	5.8	4.6	3.9
VUT	Vanuatu	0.2	49.9	52.6	40.6	35.3	41.7	45.7	31.0	296.9	12.6	14.1	10.4	8.2	9.3	9.7	6.3	10.1
SLB	Solomon Islands	0.4	45.3	35.2	44.8	55.4	47.0	46.6	42.2	316.4	7.5	5.5	6.1	7.2	5.7	5.1	4.7	6.0
MDV	Maldives	0.3	21.7	35.3	38.6	29.1	28.9	51.6	30.6	235.7	4.3	6.4	6.3	4.3	4.0	6.4	3.5	5.0
SWZ	Swaziland	0.9	55.1	53.9	53.7	53.0	56.0	55.5	30.5	357.6	2.5	2.3	2.1	2.0	2.0	1.9	1.0	2.0
GNQ	Equatorial Guinea	0.4	61.9	63.1	62.1	53.1	30.3	33.8	31.13	35.3	17.1	16.8	13.8	9.1	4.5	3.5	2.4	9.6
COM	Comoros	0.5	46.4	64.9	48.6	50.2	40.0	43.3	40.1	333.4	6.2	8.9	5.9	5.7	4.6	5.0	4.5	5.8
WSM	Western Samoa	0.2	48.0	56.8	49.5	52.5	48.4	42.9	32.4	330.4	–	–	–	–	–	–	–	–
STP	São Tomé and Principe	0.1	55.0	51.7	56.9	46.8	50.1	84.2	47.0	391.7	–	–	–	–	–	–	–	–
BTN	Bhutan	0.7	47.9	64.2	56.5	65.8	76.5	73.8	62.4	447.0	–	–	–	–	–	–	–	–
CPV	Cape Verde	0.4	110.3	105.8	122.1	117.9	121.4	112.3	119.9	809.7	17.8	16.8	18.7	17.6	17.4	15.2	15.4	17.0
DJI	Dijbouti	0.6	194.6	108.3	113.1	133.8	129.2	106.2	97.4	882.6	–	–	–	–	–	–	–	–
GUY	Guyana	7.8	169.0	129.9	91.5	108.3	80.4	88.3	143.8	811.2	12.1	8.5	5.3	5.6	4.1	4.0	7.0	6.7
TOTAL		7.8	1126.1	1028.6	987.1	1037.0	980.5	1036.8	1025.0	7221.1	6.4	5.8	5.1	5.1	4.5	4.3	6.3	5.4

Table 5 (continued)

$US millions											Relative to GDP (%)							
		Pop								Sum								Avg
Population 1–2 m		**1996**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**	**1990**	**1992**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**
TTO	Trinidad & Tobago	1.3	18.2	–1.5	9.0	2.5	21.4	25.6	16.9	92.1	0.3	0.0	0.1	0.0	0.3	0.3	0.2	0.2
EST	Estonia	1.5	0.0	15.4	104.4	42.4	43.8	58.2	62.3	326.4	0.0	0.2	1.6	0.7	0.7	0.9	0.9	0.7
MUS	Mauritius	1.1	88.9	67.5	45.5	25.8	14.2	21.9	18.9	282.6	1.4	1.0	0.6	0.3	0.2	0.2	0.2	0.5
GMB	Gambia, The	1.1	100.0	102.7	113.0	86.5	70.8	47.7	38.5	559.2	9.0	8.8	8.7	6.1	4.8	3.4	–	6.8
GAB	Gabon	1.1	132.4	143.4	69.4	102.4	181.9	144.6	126.5	900.7	2.2	2.1	1.0	1.4	2.4	1.8	1.5	1.8
BWA	Botswana	1.5	148.5	136.0	113.6	133.4	86.8	91.3	80.8	790.4	1.9	1.6	1.2	1.4	0.8	0.8	0.7	1.2
GNB	Guinea-Bissau	1.1	129.7	115.5	105.1	95.6	175.5	116.4	179.9	917.6	16.4	13.6	11.7	10.1	17.7	10.8	15.7	13.7
TOTAL		8.7	617.7	579.0	560.0	488.6	594.4	505.7	523.7	3868.0	1.6	1.5	1.4	1.2	1.4	1.1	1.1	1.3
Population 2–5 m																		
TKM	Turkmenistan	4.6	0.0	0.0	5.4	24.6	25.0	26.2	23.8	104.9	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.1
MDA	Moldova	4.3	0.0	0.0	9.7	28.5	54.0	66.6	37.2	196.1	0.0	0.0	0.1	0.3	0.8	1.0	0.6	0.4
LVA	Latvia	2.5	0.0	3.4	84.0	33.4	52.6	63.5	78.5	315.4	0.0	0.0	0.9	0.4	0.6	0.7	0.9	0.5
OMN	Oman	2.2	66.0	15.2	37.4	48.7	95.3	58.7	61.6	382.8	0.5	0.1	0.2	0.3	0.5	0.3	–	0.3
LTU	Lithuania	3.7	0.0	4.0	93.8	62.2	71.3	179.6	89.4	500.3	0.0	0.0	0.5	0.4	0.5	1.1	0.5	0.4
URY	Uruguay	3.2	54.0	51.5	73.0	122.6	85.9	82.6	51.5	520.9	0.3	0.3	0.4	0.6	0.4	0.4	0.2	0.4
ERI	Eritrea	3.7	0.0	0.0	0.0	68.1	158.3	149.9	157.2	533.4	–	–	–	–	–	–	–	–
PAN	Panama	2.7	98.5	101.9	162.1	80.0	39.8	49.1	89.5	620.0	0.8	0.7	1.0	0.5	0.2	0.3	0.5	0.6
CRI	Costa Rica	3.4	229.6	174.1	139.8	98.4	76.3	25.4	–6.8	736.8	1.5	1.1	0.8	0.5	0.4	0.1	0.0	0.6
KGZ	Kyrgyz Republic	4.6	0.0	0.0	3.5	93.6	171.9	283.5	231.9	784.3	0.0	0.0	0.0	0.8	1.9	3.2	2.5	1.2
PRY	Paraguay	5.0	56.7	146.0	103.0	137.9	103.3	146.1	97.1	790.1	0.4	1.1	0.7	0.9	0.7	0.9	0.6	0.7
ARM	Armenia	3.8	0.0	2.7	22.5	109.5	191.2	217.7	294.9	838.4	0.0	0.0	0.3	1.7	2.8	2.9	–	1.3
LSO	Lesotho	2.0	142.6	126.2	144.6	142.9	116.6	114.8	107.2	894.8	7.1	6.4	6.8	6.2	4.2	3.9	3.1	5.4
LBR	Liberia	2.8	112.1	158.0	119.4	122.8	63.5	123.1	206.6	905.6	–	–	–	–	–	–	–	–
MNG	Mongolia	2.5	13.1	69.5	122.9	126.0	184.0	207.8	200.8	924.0	0.3	1.7	3.1	3.2	4.5	4.6	4.3	3.1
JAM	Jamaica	2.5	272.6	162.2	122.7	102.7	113.5	106.3	57.5	937.5	3.6	2.0	1.5	1.2	1.3	1.1	0.6	1.6
SLE	Sierra Leone	4.6	62.8	104.9	134.9	208.7	276.5	206.6	196.0	1190.3	2.5	4.3	5.8	8.8	11.2	9.1	8.1	7.1

Table 5 (continued)

$US millions											Relative to GDP (%)							
		Pop								Sum								Avg
Population 2–5 m		**1996**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**	**1990**	**1992**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**
TGO	Togo	4.2	261.3	202.2	223.8	97.6	125.9	192.8	166.0	1269.5	4.3	3.2	3.6	1.9	2.1	2.9	2.3	2.9
CAF	Central African R.	3.3	251.1	174.7	177.7	173.3	166.4	167.5	166.9	1277.5	6.1	4.1	4.1	4.0	3.5	3.4	3.4	4.1
LBN	Lebanon	4.1	259.3	132.2	123.5	144.3	235.4	189.0	233.8	1317.5	–	–	–	0.8	1.2	0.8	1.0	0.9
COG	Congo	2.7	218.1	133.7	113.5	123.2	362.1	125.4	429.7	1505.7	5.6	3.2	2.6	2.8	8.8	2.9	8.9	5.0
LAO	Lao People's Dem.	4.7	151.2	143.3	165.3	206.8	213.4	305.2	333.2	1518.3	4.4	3.8	4.0	4.6	4.3	5.6	5.6	4.6
ALB	Albania	3.3	11.1	324.2	389.7	265.6	164.7	181.1	222.0	1558.3	–	–	–	–	–	–	–	–
MRT	Mauritania	2.3	239.8	219.9	202.1	328.0	269.0	230.7	273.6	1763.1	7.9	6.9	6.0	8.9	6.9	5.5	6.1	6.9
PNG	Papua New Guinea	4.4	413.4	396.8	442.2	309.3	325.7	372.9	382.5	2642.7	5.5	4.7	4.4	2.6	2.5	2.9	2.9	3.6
JOR	Jordan	4.3	888.1	920.7	425.1	308.6	370.1	535.0	513.7	3961.4	10.0	9.9	3.8	2.5	2.8	3.6	3.3	5.1
NIC	Nicaragua	4.5	334.6	841.1	659.2	325.6	601.2	654.8	951.5	4367.9	5.6	11.7	8.3	4.1	7.0	7.3	10.2	7.8
TOTAL		96.1	4135.9	4608.2	4300.6	3892.5	4713.0	5061.9	5646.5	32,358.6	1.8	2.0	1.9	1.6	1.9	1.9	2.3	1.9
Population 5–10 m																		
TJK	Tajikistan	5.9	0.0	0.0	11.7	25.6	66.6	64.7	113.0	281.5	0.0	0.0	0.1	0.3	1.0	1.3	2.1	0.7
AZE	Azerbaijan	7.6	0.0	0.0	5.6	21.9	147.4	109.0	106.3	390.2	0.0	0.0	0.0	0.1	1.2	1.0	0.9	0.5
DOM	Dominican Rep.	8.0	101.3	66.5	64.9	4.4	68.4	121.7	101.5	528.6	0.4	0.3	0.2	0.0	0.2	0.4	0.3	0.3
SVK	Slovak Republic	5.3	6.9	114.5	63.8	50.5	78.5	98.1	141.3	553.5	0.0	0.3	0.2	0.2	0.2	0.3	0.4	0.2
GEO	Georgia	5.4	0.0	0.2	5.3	101.1	176.4	208.7	318.4	810.2	0.0	0.0	0.0	1.1	2.1	2.4	–	0.9
BGR	Bulgaria	8.4	15.3	316.1	147.7	114.8	158.3	113.7	170.0	1035.9	0.0	0.8	0.4	0.3	0.4	0.3	0.5	0.4
TUN	Tunisia	9.1	393.4	357.2	390.3	227.6	106.7	71.4	126.4	1672.8	1.3	1.1	1.1	0.6	0.3	0.2	0.3	0.7
TCD	Chad	6.6	316.5	265.8	240.8	227.5	214.7	239.1	305.1	1809.6	7.0	5.4	4.3	4.7	4.0	4.2	5.1	4.9
BDI	Burundi	6.4	265.5	259.1	311.6	218.3	313.0	287.9	203.8	1859.1	6.5	5.9	6.7	5.0	7.2	7.0	5.3	6.2
BEN	Benin	5.6	269.0	268.4	270.4	289.4	257.2	281.5	292.7	1928.6	5.9	5.8	5.0	5.0	4.2	4.3	4.1	4.9
HTI	Haiti	7.3	172.4	181.9	102.3	123.7	601.3	730.6	374.2	2287.2	1.9	2.0	1.2	1.5	8.0	9.0	4.5	4.0
SLV	El Salvador	5.8	347.0	294.2	408.9	407.0	317.7	306.1	317.2	2398.2	3.4	2.7	3.3	3.0	2.2	1.9	1.9	2.6
NER	Niger	9.3	398.4	377.0	370.2	347.0	377.4	270.2	258.8	2398.9	5.7	5.1	5.1	4.7	4.8	3.2	3.0	4.5
HND	Honduras	6.1	450.8	302.5	358.1	342.2	297.7	410.4	367.3	2528.9	4.6	3.0	3.4	2.9	2.5	3.3	2.8	3.2

Table 5 (continued)

$US millions											Relative to GDP (%)							
		Pop								Sum								Avg
Population 5–10 m		**1996**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**	**1990**	**1992**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**
GIN	Guinea	6.8	295.6	382.0	450.3	409.8	360.0	415.8	295.5	2608.9	3.6	4.4	4.8	4.1	3.4	3.6	2.4	3.8
SOM	Somalia	9.8	494.4	186.2	653.5	890.4	537.7	191.2	91.1	3044.5	–	–	–	–	–	–	–	–
MLI	Mali	10.0	487.5	457.7	435.2	366.0	442.6	544.9	505.0	3238.8	9.3	8.5	7.2	6.1	7.0	7.8	6.9	7.5
RWA	Rwanda	6.7	292.3	363.6	353.7	358.2	714.5	710.9	674.4	3468.5	5.5	6.7	5.8	6.4	24.2	19.2	15.8	11.9
MWI	Malawi	10.0	505.3	524.6	573.3	497.7	469.2	433.8	500.6	3504.3	10.5	9.9	11.6	8.5	9.2	7.2	7.1	9.1
BOL	Bolivia	7.6	553.8	512.6	675.2	576.2	577.7	734.0	849.5	4478.9	3.7	3.1	3.9	3.1	2.9	3.4	–	3.3
SEN	Senegal	8.5	822.7	639.0	675.6	504.3	644.1	667.9	579.8	4533.4	7.6	5.8	5.7	4.2	5.1	4.9	4.0	5.3
ZMB	Zambia	9.2	480.9	883.3	1035.9	871.8	718.5	2034.8	613.9	6639.2	6.6	11.9	13.4	10.7	9.3	26.6	7.5	12.3
TOTAL		165.6	6669.6	6752.3	7604.1	6975.3	7645.4	9046.3	7306.8	51,999.6	2.2	2.2	2.6	2.4	2.6	2.9	2.5	2.5
Population 10–20 m																		
KAZ	Kazakhstan	16.5	0.0	111.5	9.5	14.0	48.3	57.7	123.9	364.8	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.1
CZE	Czech Republic	10.3	13.7	230.6	130.4	100.2	148.7	147.9	121.6	893.1	0.0	0.3	0.2	0.1	0.2	0.1	0.1	0.1
BLR	Belarus	10.3	0.0	187.0	273.1	185.8	119.1	222.8	73.5	1061.3	0.0	0.3	0.5	0.4	0.3	0.5	0.2	0.3
CHL	Chile	14.4	108.4	125.5	135.5	184.7	157.7	159.6	203.4	1074.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HUN	Hungary	10.2	67.3	626.0	222.9	165.8	200.5	-244.0	185.1	1223.7	0.1	1.0	0.4	0.3	0.3	-0.4	0.3	0.3
GTM	Guatemala	10.9	203.4	198.6	198.5	214.2	224.3	214.7	216.1	1469.8	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6
ECU	Ecuador	11.7	163.0	238.0	243.8	240.1	216.6	236.1	260.9	1598.6	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4
YEM	Yemen, Republic	15.8	406.2	300.1	256.2	314.4	172.4	175.0	260.4	1884.7	–	–	2.5	3.0	1.6	1.4	1.8	2.1
KHM	Cambodia	10.3	41.6	91.0	206.8	316.8	338.8	566.8	452.8	2014.6	–	–	–	–	–	–	–	–
MDG	Madagascar	13.7	399.4	455.9	362.7	363.0	289.3	303.2	364.5	2538.1	3.7	4.3	3.2	3.1	2.4	2.4	2.8	3.1
AGO	Angola	11.1	269.4	279.7	350.5	293.9	451.0	417.9	544.2	2606.6	2.0	2.0	2.1	2.1	2.4	1.9	2.4	2.1
SYR	Syrian Arab Rep.	14.5	683.9	381.4	197.4	259.4	745.1	349.1	225.3	2841.6	2.7	1.3	0.6	0.7	1.9	0.8	–	1.3
BFA	Burkina Faso	10.7	335.1	423.7	438.8	470.0	435.8	486.6	418.2	3008.3	4.8	5.4	5.2	5.5	4.9	5.1	4.1	5.0
ZWE	Zimbabwe	11.2	340.5	393.3	792.3	500.0	559.9	488.9	367.7	3442.7	1.7	1.8	3.8	2.3	2.4	2.1	1.4	2.2
CMR	Cameroon	13.7	447.1	518.5	715.9	545.4	730.7	444.0	413.3	3814.9	2.0	2.3	3.1	2.4	3.2	1.8	1.6	2.3
GHA	Ghana	17.5	563.5	882.1	612.9	618.1	546.4	652.9	644.3	4520.1	2.7	3.8	2.5	2.3	1.9	2.2	2.0	2.5

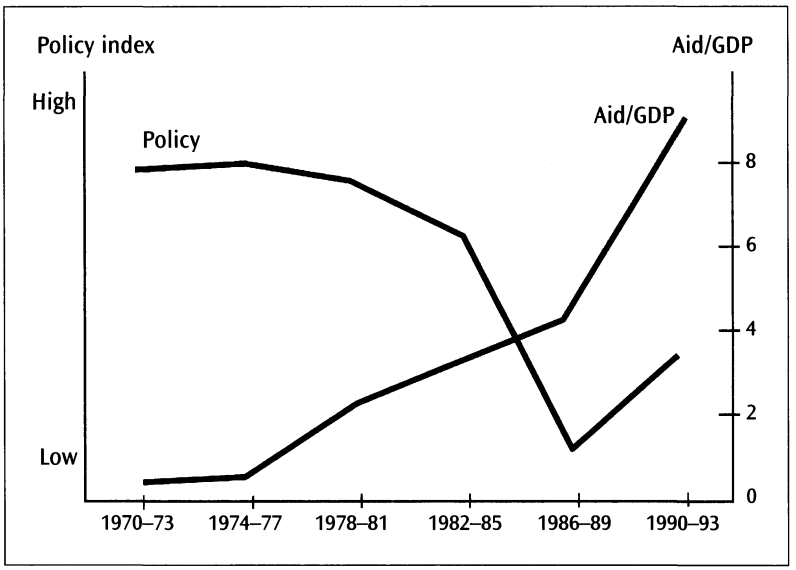
Table 5 (continued)

$US millions											Relative to GDP (%)							
		Pop								Sum								Avg
Population 10–20 m		**1996**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**	**1990**	**1992**	**1992**	**1993**	**1994**	**1995**	**1996**	**90–96**
LKA	Sri Lanka	18.3	729.9	890.5	639.3	659.4	595.4	555.5	494.5	4564.5	2.6	2.9	2.0	1.9	1.6	1.3	1.2	1.9
UGA	Uganda	19.7	670.8	666.8	728.3	612.3	750.2	828.1	673.3	4929.9	5.8	5.3	5.3	4.1	4.6	4.5	3.3	4.7
CIV	Côte d'Ivoire	14.3	689.3	632.7	757.8	765.1	1594.1	1212.3	967.6	6618.8	3.7	3.3	3.9	3.8	7.6	5.2	3.9	4.5
MOZ	Mozambique	18.0	1006.9	1070.3	1468.1	1183.1	1231.0	1099.7	919.0	7978.1	17.3	17.0	21.8	14.2	13.6	11.8	9.2	15.0
TOTAL		273.2	7139.4	8703.3	8740.9	8005.8	9555.1	8374.8	7929.6	58448.8	1.1	1.3	1.2	1.1	1.3	1.1	1.0	1.2
Population 20–50 m																		
KOR	Korea, Republic	45.5	52.5	54.8	–3.1	–40.8	–113.6	58.0	–146.9	–139.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UZB	Uzbekistan	23.2	0.0	0.0	1.4	7.5	27.6	81.1	87.2	204.7	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
VEN	Venezuela	22.3	79.5	30.7	40.9	49.3	31.4	48.6	44.2	324.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MYS	Malaysia	20.6	468.8	289.5	205.5	94.0	68.2	115.0	–453.8	787.2	0.4	0.2	0.1	0.1	0.0	0.1	–0.2	0.1
MMR	Myanmar	45.9	164.0	179.4	115.1	101.5	161.6	151.8	56.2	929.5	–	–	–	–	–	–	–	–
COL	Colombia	37.5	96.1	122.5	246.1	108.1	128.4	230.8	250.8	1182.9	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
ROM	Romania	22.6	243.1	321.1	258.0	167.5	144.5	275.6	218.4	1628.2	0.3	0.4	0.3	0.2	0.2	0.3	0.2	0.3
ARG	Argentina	35.2	183.7	299.5	292.4	284.0	225.3	224.5	277.4	1786.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DZA	Algeria	28.7	263.3	340.0	406.4	348.6	419.6	312.2	309.0	2399.0	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3
ZAR	Zaire	45.2	897.7	476.2	269.1	178.2	245.4	195.1	167.4	2429.2	1.8	1.0	0.6	0.5	0.6	0.5	0.4	0.8
NPL	Nepal	22.0	429.0	453.4	434.9	364.3	448.2	427.8	391.9	2949.4	2.8	2.8	2.4	1.9	2.1	1.9	1.7	2.2
PER	Peru	24.3	401.3	614.0	409.9	580.1	417.4	427.1	409.8	3259.5	0.6	0.8	0.5	0.7	0.4	0.4	0.4	0.5
SDN	Sudan	27.3	826.6	880.9	549.5	457.8	413.0	235.8	230.3	3593.8	–	–	–	–	–	–	–	–
MAR	Morocco	27.0	1050.5	1232.4	946.9	712.6	631.1	495.8	650.8	5720.1	1.6	1.7	1.3	0.9	0.7	0.6	0.7	1.1
KEN	Kenya	17.4	1187.3	921.2	886.4	910.7	676.5	731.7	606.1	5919.8	4.9	3.7	3.4	3.4	2.5	2.4	1.9	3.2
TZA	Tanzania	30.5	1174.5	1080.7	1343.3	953.2	968.5	881.7	893.7	7295.5	–	–	–	–	–	–	–	4.9
POL	Poland	38.6	1322.1	2508.3	1438.5	1031.2	1806.2	3790.4	830.5	12,727.2	0.8	1.5	0.8	0.6	0.9	1.7	0.4	1.0
TOTAL		523.9	8839.8	9804.5	7841.1	6307.7	6699.2	8682.8	4822.9	52,998.0	0.5	0.6	0.4	0.3	0.3	0.4	0.2	0.4

Table 5 (continued)

$US millions											Relative to GDP (%)							
Population 50 m +		Pop 1996	1990	1991	1992	1993	1994	1995	1996	Sum 90–96	1990	1992	1992	1993	1994	1995	1996	Avg 90–96
IRN	Iran, Islamic Rep.	62.5	105.3	194.4	106.6	141.0	130.7	191.9	171.0	1040.8	0.0	0.1	0.0	0.0	0.0	0.1	–	0.1
BRA	Brazil	161.4	167.1	182.6	-234.5	239.2	336.7	366.9	408.2	1466.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NGA	Nigeria	114.6	250.4	262.6	258.6	279.0	190.2	212.3	191.8	1644.9	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
MEX	Mexico	93.2	160.0	278.3	316.7	423.7	431.1	390.1	289.1	2289.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
UKR	Ukraine	50.7	289.0	368.3	557.6	327.9	289.8	319.1	378.6	2530.2	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.2
VNM	Vietnam	75.4	189.8	237.5	575.0	258.0	896.8	828.8	927.0	3912.8	–	0.4	0.7	0.3	0.9	0.8	0,8	0.6
TUR	Turkey	62.7	1219.5	1622.5	268.8	406.5	160.2	303.7	232.6	4213.8	0.5	0.6	0.1	0.1	0.1	0.1	0.1	0.2
THA	Thailand	60.0	796.9	721.5	770.9	611.0	578.2	865.1	831.6	5175.0	0.4	0.3	0.3	0.2	0.20	0.20	0.2	0.2
ETH	Ethiopia	58.2	1019.7	1097.3	1182.1	1093.7	1074.4	887.6	849.4	7204.1	4.9	5.4	5.8	4.7	4.4	3.4	2.9	4.5
PAK	Pakistan	133.5	1129.7	1370.9	1013.0	1004.7	1602.7	820.6	875.7	7817.4	0.8	0.9	0.6	0.6	0.9	0.4	0.4	0.7
PHL	Philippines	71.9	1277.4	1053.0	1716.1	1486.8	1056.9	885.1	879.2	8345.6	0.7	0.6	0.9	0.7	0.5	0.4	0.4	0.6
RUS	Russian Fed.	147.7	254.0	563.5	1935.0	2419.8	1847.6	1610.0	1225.2	9855.0	0.0	0.1	0.2	0.3	0.3	0.2	0.2	0.2
BGD	Bangladesh	121.7	2100.5	1889.1	1824.9	1383.3	1757.5	1279.3	1254.7	11489.2	2.6	2.2	1.9	1.4	1.6	1.1	1.0	1.7
IDN	Indonesia	197.1	1747.0	1874.4	2082.2	2017.5	1640.6	1388.4	1111.6	11,861.8	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.3
IND	India	945.1	1407.0	2745.0	2430.8	1459.0	2324.9	1743.8	1936.3	14046.7	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.2
CHN	China	1215.4	2092.5	1998.7	3055.1	3271.2	3236.6	3531.7	2616.2	19,802.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EGY	Egypt, Arab Rep.	59.3	5438.5	5024.7	3603.5	2400.8	2694.8	2021.9	2212.0	23,396.2	4.6	4.1	2.7	1.7	1.8	1.3	1.3	2.5
TOTAL		3630.3	19,644.3	21,462.2	21,462.2	19,222.9	20,249.8	17,646.3	16,390.2	136,099.8	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2

Figure 8



Another reason why donors may give relatively little aid to poor countries that have reformed is a sense that such countries can attract private foreign investment, obviating the need for official assistance. The issue of the relationship between aid and foreign investment is taken up in the next section.

Foreign direct investment and riskiness in small states

If poor countries that reform can easily attract foreign private investment, then there may not be much of a role for aid in such cases. The fact that we find a strong growth effect of aid in countries with good policies suggests that this is not so, but it is an important question to investigate. At the same time, we are interested in whether small states have any special problems when it comes to attracting foreign direct investment. We focus on FDI because it is the main form of foreign private finance for low-income countries. The portfolio flows have mostly gone to middle-income countries. Furthermore, the East Asian crisis has highlighted that portfolio flows have to be managed very carefully and are not necessarily an unmitigated blessing for developing countries. FDI, on the other hand, has clearly been beneficial for many developing countries. Our focus here is on trying to explain FDI flows to the developing world.

For this purpose we have developed a new database with annual flows of

net FDI to a large number of developing countries, over the period 1979–95. Through this approach we are able to obtain nearly 600 observations. In Table 6, column 1, we explain the flow of FDI relative to GDP. We included different policy measures (an index of macro policy, a measure of the rule of law and the CPIA index), as well as the Institutional Investor risk assessment (where a higher number means less risk). In OLS regressions the risk measure has a strong relationship with FDI, whereas none of the policy measures is significant *after controlling for the risk assessment*. This finding is consistent with the view that rule of law and policies matter, but that investors' information about these is filtered through rating agencies such as Institutional Investor. We are going to treat the assessment of risk as an endogenous variable, so we will make the following identifying assumption: rule of law and the different policy measures belong in the Risk equation, but not directly in the FDI equation. This enables us to use them as instruments in a 2SLS estimation of the FDI equation, which is what we report in column 1.

We find that the Risk measure has a strong relationship with FDI flows. Furthermore, the share of the population with secondary education has a positive, but not significant, relationship with FDI. It is interesting that after controlling for risk and human capital, there is still a strong positive relationship between per capita income and FDI flows. This may reflect that richer countries have other attractive features not measured here (such as infrastructure); or a desire of foreign investors to be in larger markets; and/or simply a prejudice against poorer countries, even after controlling for the characteristics that should matter (risk and human capital). The regression includes a dummy for countries with population below 5 million. This has a negative coefficient, but it is not statistically significant. Finally, the regression includes aid and aid x what we call 'management' (which is an average of the rule of law, macro policy, CPIA and secondary education measures). 'Management' captures whether a country has a good environment for investment and production. We instrument for both aid and aid x management (to address potential endogeneity problems: that is, that some aid is deliberately given to countries in difficult situations that would deter private investment).[1]

Both the ratio of aid to GDP and aid x management have very strong positive relationships with FDI. This indicates that in general aid creates

[1]Given that the indicator variable for small states is already in the equation, we establish that population has no additional explanatory power in either the risk or the FDI equations. Thus, we can use population as an instrument, as well as measures of colonial background and the interaction of management with population and with colonial background.

Table 6. Explaining FDI and Risk

	FDI/GDP	Risk
Method	2SLS Panel 1979–95	2SLS Panel 1979–95
Initial Income	.80** (2.46)	-.06 (.56)
Risk	.03** (2.03)	–
Pop. < 5m	-.24 (1.06)	-.28* (2.95)
Secondary Education	.23 (.91)	.02 (.19)
Aid/GDP	.89* (5.76)	.07 (.67)
Aid x Management	.41* (3.70)	.28* (3.08)
Rule of Law	–	.07** (2.27)
Macro Policy	–	.11** (2.00)
CPIA	–	.15* (3.15)
N	519	560

*Significant at the 1 per cent level.
**Significant at the 5 per cent level.
Note: t-statistics in parentheses.

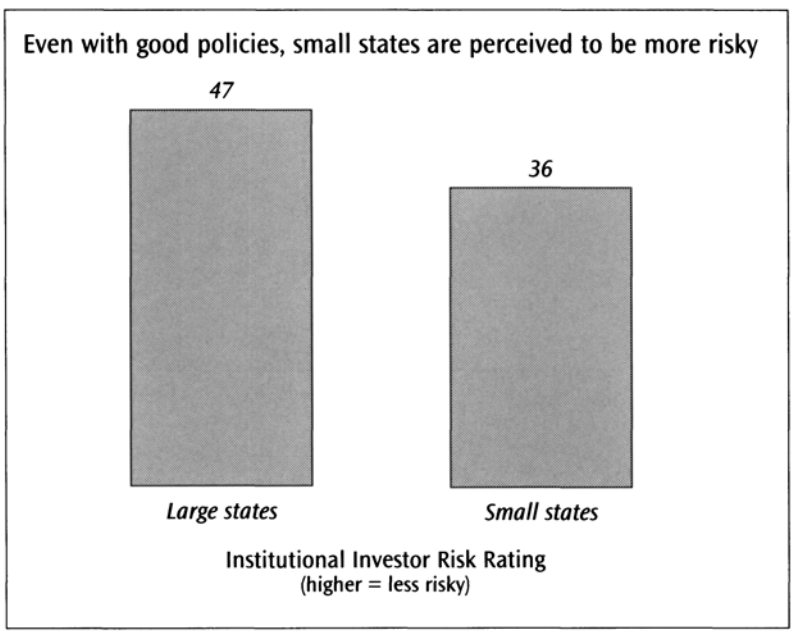
a good environment for private foreign flows, *and that the effect is strongest in a good policy environment*. We noted at the end of the last section that donors may be reducing aid to poor countries with good policies on the assumption that they can attract private investment. However, good policies do not directly enter the FDI equation: they are mediated by the risk assessment, which we will turn to in a moment. Even controlling for the level of risk and human capital, poor countries tend to be discriminated against. Aid can help overcome this discrimination, and it does so particularly effectively in a good policy environment. This result helps us understand the strong effect of aid on growth in a good policy environment: in such an environment aid is 'crowding in' direct foreign investment. It could do this through increasing confidence in the policy environment and/or through enabling the government to provide services that

are complementary to private investment (for example roads and schools).

In the second column of Table 6 we attempt to explain the Institutional Investor risk assessment. First, this measure is strongly related to economic institutions and policy. It has a strong positive relationship to the rule of law and to the CPIA assessment. It is interesting that, after controlling for these, its relationship to an index of macro policies is actually negative. We do not have a simple explanation for this. The CPIA also includes macro policy. By putting a negative coefficient on the macro policy index and a positive one on the CPIA, the data seem to be singling out the non-macro parts of the CPIA: structural policies, economic governance, social investments. Furthermore, the rule of law comes through very clearly. The general point seems to be that the more micro/institutional aspects of policy reform are critical for attracting FDI.

It is also interesting that after controlling for these and for human capital, there is no relationship between per capita income and Risk. However, here the 'small states' indicator variable has a very significant role: with the same policies and human capital, small states are perceived to be 28 per cent more risky, with high statistical significance (Fig. 9). We experimented with other dummy variables to see if there was a differentiation among population below one million, or below two million,

Figure 9.



and found that these smaller states are perceived to be the same – in terms of risk – as the states with populations between two and five million.

What is also important for our story is that aid reduces the perceived riskiness of developing countries, but only if they have good policy. We have scaled the management index to have zero mean and a standard deviation of one, for ease of interpretation. At the mean of management, the interactive term is zero; and the coefficient on aid/GDP is not statistically different from zero. Thus, at the average quality of management, aid has no effect on perceived riskiness. In a good management environment, on the other hand, aid reduces perceived risk (Fig. 10). In fact, 1 per cent of PPP GDP in aid almost exactly offsets the disadvantage faced by smaller states, in terms of perceived riskiness.

Because we are treating FDI and Risk as a system, it is useful to summarise what we learn from the two equations together. Small states are perceived to be riskier, controlling for other fundamentals. This risk perception affects actual flows of FDI. So, while the small states indicator does not show up as significant in the FDI equation, small states have a harder time attracting investment because they are perceived to be riskier Similarly, good institutions and policies are important, but they do not

Figure 10

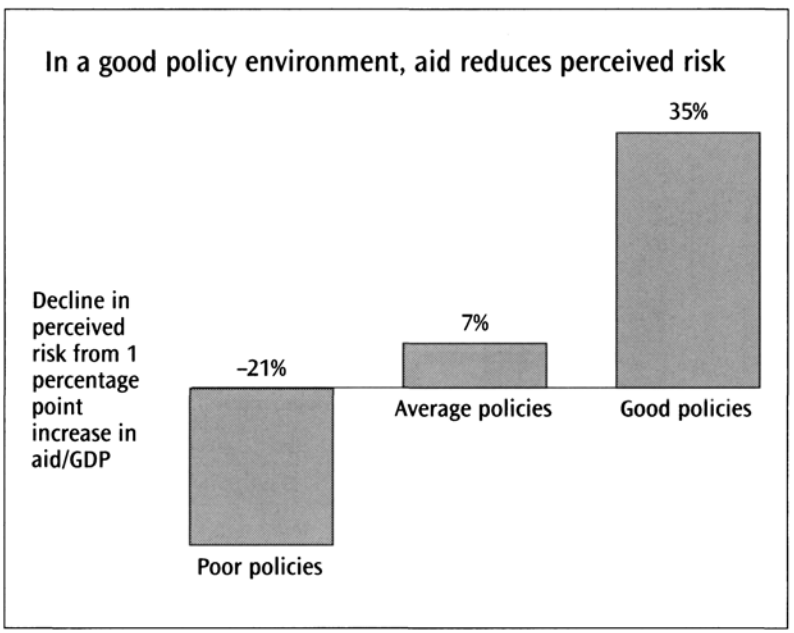
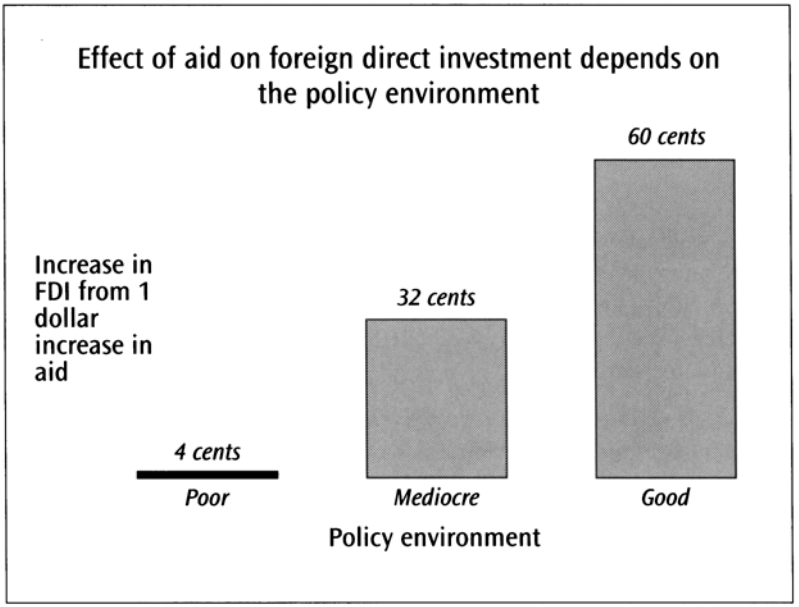


Figure 11



show up directly in the FDI equation. Rather, they affect risk perception, which in turn influences private flows. Finally, aid plays a role in both equations. In a good policy environment, aid reduces perceived risk, while in a poor policy environment it actually leads to higher perceived risk. In this way aid indirectly affects private flows. After controlling for risk, aid also directly affects FDI, again with a stronger effect in a good policy environment. The total effect of aid on FDI depends on the indirect and direct effects combined. This combined 'crowding in' effect of $1 of aid is 60 cents in a good policy environment, 32 cents in an average policy environment, and 4 cents in a poor policy environment (Fig. 11).

Conclusions

Much of the analysis of *Assessing Aid* is directly relevant to small states, but there are some important nuances to the message that emerge from this analysis. What we have found is that:

- Small states on average have the same growth rates and the same quality of policies as large states. Furthermore, policies are key to good performance.
- The effect of aid on growth depends on the quality of policies, and is only large in countries that have reasonably good policies.

- The allocation of aid – after controlling for poverty and population – bears little relationship to policy. In the case of large countries, this takes the form of a somewhat perverse relationship between aid and policy: aid increases as policy goes from poor to mediocre, and then declines for truly good policy countries. In the case of small countries, this curvature is less pronounced. There simply is not much relationship between how much aid countries receive and the quality of their policies.
- It is well known that aid has declined overall in the 1990s. Between 1990 and 1996 this decline was concentrated exclusively in large countries. There was a modest increase in aid to small states. On average, small states receive about 1 per cent of PPP GDP more in aid than large states.
- The strong effect of aid on growth can be partly explained through the effect of aid on private capital flows. In a good policy environment aid and FDI are complementary. Aid has both an indirect and a direct effect. The indirect effect comes through investors' perception of the riskiness of countries. The Institutional Investor risk ratings are positively affected by aid flows, but only in a good policy environment. These ratings, in turn, have a significant effect on FDI flows. This suggests that in a good policy environment aid increases the confidence of investors in the persistence of the good policy.
- There is also a direct effect of aid on FDI, after controlling for perceived risk. This effect is strongest in a good policy environment. This finding is consistent with the notion that aid supports the government in providing services complementary to private investment (for example roads and schools), and that the value of this is particularly great where policies are also good. Thus, while donors tend to give less aid to countries with good policy, the evidence is that it is exactly in these environments that aid is critical for providing supporting services and increasing confidence.
- Small states are at a disadvantage in attracting foreign investment. Even when they have good policies and other characteristics, they are rated to be significantly more risky. To some extent this may reflect real greater underlying riskiness of the economy. But it is also likely to reflect the weaker incentives encouraging risk agencies and investors to do their homework and learn about small states.
- Aid can be used, to some extent, to offset the greater perceived riskiness of small states, but only if they are pursuing sound policies. In a weak policy environment, aid does not reduce perceived riskiness; in

fact, it is estimated to increase the perception of risk. This means that for small states with good policies, there is some justification for the practice of giving larger amounts of aid per capita. In fact, the average additional aid for small countries of 1 per cent of PPP GDP almost exactly offsets the disadvantage that their smallness creates in terms of perceived riskiness.

Thus, the basic message that large-scale financial assistance works for developing countries – but that the effect is only strong in countries with good policies – is true for both small states and large. In fact, the message is more important for small countries than for large ones. In general, developing countries that reform have trouble attracting private foreign investment, and the poorer they are, the more acute the problem. In these reformed environments, aid can help by increasing confidence and by financing complementary public services. Other things equal, small states have an especially hard time influencing investor perceptions and actual flows, so that the combination of good policy and significant flows of foreign aid is particularly potent for them.

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Globalisation and Small Developing Economies: Challenges and Opportunities[1]

Richard L. Bernal

Opportunities from globalisation

Globalisation is a multi-dimensional process, which is transforming at a rapid rate and in a profound way all aspects of national and global activities and interactions. Inherent in this process of restructuring the global economy, and concomitantly national economies, is the decline or demise of some industries and products and the simultaneous creation of opportunities for new products and services. These changes are being driven by rapid technological change and innovation, and are being facilitated by corporate integration through mergers and strategic alliances. The elimination and reduction of national barriers to the global movement of goods, services, capital, technology and certain types of labour is an integral part of globalisation. As a seamless global economy emerges, it establishes the dominance of the global market. The existence of a global market provides a highly intensive level of competition requiring continuous innovation and improvements in efficiency to supply both new and existing products and services. This process of globalisation is continually creating opportunities for exports which are globally competitive in cost and quality. Small developing countries can take advantage of many of these opportunities; however, their size and level of development pose challenges to taking advantage of these opportunities.

The restructuring of developed economies and profound technological changes in telecommunications and information technology provide significant new opportunities for small, developing countries. Tourism and services, including financial services, are among the most rapidly growing sectors of the world economy and have become important growth sectors in many small developing countries. The high cost of health care in developed countries and the aging of their populations open up possibilities in offshore health care, health tourism and retirement communities. These developments will occur rapidly as the health care industry experiences

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

the merger and consolidation of health care providers in developed countries as a prelude to the globalisation of this sector. Given cost differentials, a significant part of health care will shift from developed countries to overseas facilities in developing countries, particularly those in close proximity to developed countries. Small, developing countries with modern telecommunications and educated populations are well placed to capitalise on the enormous growth of informatics and entertainment. There will also be opportunities for manufacturing in brand name special products, for example Jamaica Blue Mountain coffee, individualised products and small high-value aspects of international production processes. Production for niche markets which may be too small to interest large corporations is a possibility, especially if these products are maintained by innovation or a well-established reputation.

Commonwealth Secretariat/World Bank Report

The Interim Report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States is titled *Small States: Meeting the Challenges in the Global Economy*. The report correctly points out that globalisation brings opportunities as well as threats, and that part of the development challenge is to exploit these opportunities successfully. This raises two questions. Firstly, what should small, developing economies do to achieve survival, growth and development? Secondly, what, if anything, should be done at the multilateral level to complement, facilitate and support the efforts of small developing economies?

Unfortunately, the report provides very little guidance on these questions because it emphasises the platitudes of conventional economic policy despite recognising that small developing countries have distinctive characteristics. The conviction that conventional policy prescription, if properly implemented, will be adequate to secure the economic future of small developing economies precludes the need for action at the multilateral level. Hence the report is bereft of useful suggestions about actions to be taken at the multilateral level. Symptomatic of these deficiencies is the emphasis on the conclusion that, generally, good domestic policies are as essential to successful development in small states as elsewhere. Without good policies, external support will not be effective. While this is true, this proposition neglects the fact that the converse is equally important, that good policies and external assistance are both indeed necessary but not sufficient conditions. Sound domestic development policies can only come to fruition in small, highly open economies if they are complemented by a conducive external environment. For example, export diversification and promotion are effective if complemented by access to external markets; for example, CBI apparel exports critically depend on

access to the US market. Hence, national economic policies and a complementary external environment are two interrelated determinants of a successful response by small developing economies to the challenges and opportunities of globalisation.

Difficulties in responding to globalisation

The opportunities provided by globalisation can only be realised if countries pursue appropriate internal economic policies. The specific package of policy measures must be designed bearing in mind the specifics of each economy. In the case of small developing countries there are challenging obstacles and rigidities, which are peculiar to this type of economy. Among the most important difficulties are the structure and operation of markets and the small size of economic entities.

Structure and operation of small markets

The small size of markets in small developing economies results in market structures which are characterised by substantial imperfections. These derive from the limited number of participants; in many cases there are monopolies and oligopolies. Even where there are a large number of producers or traders, one or a few firms effectively dominate the operation of markets both in the financial as well as the real sector. This type of market situation has several implications.

Resource use, allocation and mobilisation

The narrowness of the market, i.e. the limited number of participants and/or the dominance of one institution, reduces the efficiency with which resources are allocated and leads to distortions in resource use.

The lack of market-driven competition leads to inefficiency and higher costs, as firms are not driven by the dynamics of competition to optimise efficiency and introduce new technology and improved production systems. A firm's international competitiveness depends on its capacity to continually innovate in production techniques and products. The national market conditions in which the company operates are a significant variable in its drive to develop its competitive advantages.

The small size and skewed structure of the market inhibits the ability of small developing economies to garner resources from external sources, in particular private foreign investment. Investors are often unaware of or do not find small developing economies worthwhile as investment locations because of the limited size of the national market. Even investment for export tends to be biased in favour of larger economies, even if they are low income and less developed.

The high import content of production and consumption, the undiversified economic structure and the lack of competitive markets in small economies mean that there are rigidities in resource allocation. This makes the adjustment process more difficult, and of necessity slower than the adjustment process in larger more developed economies.

Lack of global competitiveness

Production costs in small developing countries tend to be higher for many economic activities than those prevailing in the global marketplace. This lack of global competitiveness increases import demand and reduces exports.

Small economies have severe constraints on the amount and variety of the factors of production because of their limited land area, GDP and size of population. These constraints limit the achievement of economies of scale for a wide range of products and lead to high unit costs of production. Small economies tend to have a narrower range of domestic and export production because of the small size of the market and the limited range of resources. Small market size also tends to cause high costs because there is often a lack of competition. In fact, in many instances, the market can only support a single producer, i.e. a monopoly.

Small economies pay higher transportation costs because of the relatively small volume of cargo, small cargo units and the need for bulk breaking. In fact, small economies spend more on transportation and freight costs as a percentage of exports than large countries. The figure for Brazil, Canada and the USA averages less than 4 per cent, whereas it is over 30 per cent for Antigua, Barbados, St. Kitts-Nevis and the Bahamas. Caribbean countries pay far more for transportation for their imports than the world average of 5.4 per cent – in Suriname as much as 18.5 per cent. Among the contributing factors are the small size of vessels, small scale of cargoes and the lack of equivalent return cargo.

The efficient operation of firms is also constrained by the high cost of infrastructure that is related to indivisibilities of public administration structures and functions which every country, no matter how small, has to provide. The cost of physical infrastructure tends to be high in small developing countries, imposing additional constraints on efficient production and distribution.

Small size of firms

It is firms, not countries, that conduct international economic transactions. Nationally owned firms from small countries are small both by global standards and in comparison with firms in large economies and

multinational corporations owned by or based in large countries. Except for a few sectors where economies of scale are not a significant factor, size makes a significant difference in a firm's ability to survive and compete in the global marketplace. Small firms are at a disadvantage because they cannot realise economies of scale, are not attractive business partners, and cannot spend significant funds on marketing, market intelligence, and research and development near par. In fact, Wal-Mart, the largest employer in the USA, has a staff complement of 675,000 compared to the Caribbean's top employer, Lascelles Demercado of Jamaica, which employs 6,800 staff. Total sales at the largest US corporation, General Motors, are 328 times those of Neal & Massey of Trinidad and Tobago, its Caribbean counterpart.

Trade theory as explained in textbooks assumes that international trade takes place between countries in an environment of perfect competition, and that trade occurs because of differences in comparative advantage which in turn derive from differences in resource endowment or technology. In this model all firms are price-takers, where each firm is too small to influence price in the world market and international trade occurs because of differences between countries, but the size of a country does not matter. However, when taking into account economies of scale, the size of a country and the size of a firm become important considerations. Very large firms, such as multinational corporations (MNCs), operate internationally in ways very different from small firms. Most of the trade of MNCs is intra-firm trade, rather than the traditional arms-length international trade conducted by smaller firms. It is estimated that intra-firm trade accounts for 50 per cent of the trade of the USA and is also significant in developing countries. The small size of firms in small developing economies has several implications, including:

- **Economies of scale and scope**
  Small firms in small economies, especially in small developing economies, are at a major disadvantage compared to large firms. Small firms can attain neither internal economies of scale (where unit cost is influenced by the size of firm) nor external economies of scale (where unit cost depends on the size of the industry, but not necessarily on the size of any one firm). Small firms in small developing countries have severe difficulties in attaining economies of scope, i.e. economies obtained by a firm using its existing resources, skills and technologies to create new products and/or services for export. Exposure to global competition requires small firms to invest heavily just to survive in their national market and more so in order to export. Larger firms are better able to generate new products and sources from existing organisation and networks.

- **Retarded market-driven competitiveness**
  Small developing economies and their small markets are unlikely to foster the competitive dynamic necessary for firms (including export sectors) to achieve competitive global competitiveness. The attainment of competitive advantage is more likely to occur when the economy is large enough to sustain clusters of industries connected through vertical and horizontal relationships and where there is a network of related and supporting industries. A firm working together with world-class local suppliers can benefit from cross-fertilization opportunities. Related industries can also be an important source of innovations and provide strategic alliances and joint ventures.

Constricted economic management

A limited national market and the small size of economic entities have adverse implications for stabilisation, adjustment and transformation because these structural features reduce the efficacy of conventional policy measures and narrow the range of policy options.

Stabilisation policy must be designed specifically for small developing countries taking cognizance of the structure of markets and the nature of their operations. The uncompetitive nature of these markets, particularly where monopolies and oligopolies exist, and the limited number and type of institutions, make resource utilisation and allocation more problematic than in large developed economies. These types of market situations are characterised by rigidities, which make the adjustment process more time-consuming and which diminish the efficacy of conventional policy measures such as open market operations and recalibration of economy-wide prices such as the exchange rate. Furthermore, structural adjustment, like stabilisation, is a more difficult process in small developing economies because the inherent rigidities in the structure and operation of markets complicate the process of resource reallocation. The nature of these small markets also restricts the ability of private sector entities and the government to mobilise additional resources, both within these economies and from external sources.

Small developing economies have structural features that need to be changed if they are to cope with the rapid and profound changes associated with globalisation. Adjustment will not suffice to enable these economies to cope with changes in the global economy, since adjustment implies marginal and incremental modification to an economic structure which is fundamentally sound and conducive to sustainable economic growth. Economic transformation goes beyond the resource utilisation, reallocation and mobilisation intrinsic in stabilisation and structural

adjustment to incorporate resource creation over the medium to long term. Transformation in the current and future global economy will entail the ability of small developing economies to facilitate the rapid and frictionless international mobility of goods, services, finance, capital and technology which is the essence of a seamless global economy.

The challenge in this context is how to formulate and implement economic policy that permits small developing countries to respond to globalisation in a way that ensures sustainable economic development.

National policy response – strategic global repositioning

The changes involved in globalisation are so profound that the implications for small developing countries cannot be addressed only by having sound conventional economic policy. While this is necessary, the response is a developmental issue rather than an issue of economic management. An appropriate response by small developing economies to globalisation is a development strategy that is best described as strategic global repositioning (SGR). Strategic global repositioning is a process of repositioning a country in the global economy and world affairs by implementing a strategic medium- to long-term plan formulated from continuous dialogue between the public sector, private sector, academic community and the social sector. It involves proactive structural and institutional transformation (not adjustment) focused on improvement and diversification of exports and international economic and political relations. Achieving SGR therefore requires changes in both internal and external relations. The external relations are of paramount importance because of the highly open and vulnerable nature of these small developing economies.

Strategic global repositioning begins with a change of mind, outlook and attitude. The prerequisite for such change is a recognition of the need for new ideas and a willingness to abandon the traditional mindset. This will be incumbent on governments as well as the business sector. An integral part of strategic global repositioning will be export diversification encompassing the development of new exports, for example informatics, as well as improving competitiveness and productivity in existing export sectors. Some foreign exchange earning sectors, such as tourism, will have to undertake a continual process of adjusting their product mix to shifting demands, for example increased travel by older and retired people. Traditional export commodities may not be viable and face the choice of being phased out or used as inputs in higher valued added goods such as rum. The experience of Antigua's transition from an economy based on sugar to one in which tourism is the core activity is encouraging. This is

a very real prospect for economies heavily dependent on the export of bananas, such as St. Lucia, St. Vincent and Dominica.

The only certainty in tomorrow's global economy is change, and change at an exponential rate, which makes speedy decision-making and implementation an essential aspect of life in the future. The ability to discern changes, to adopt and adapt to new technology, and to reorganise rapidly will ultimately determine the capacity to respond. Firms, governments and individuals must get accustomed to a lack of permanence and recognise that this presents challenges and opportunities. The countries that achieve economic development practice 'proactive adjustment' by adjusting rapidly in anticipation of global changes in demand and technology. Defensive and reactive adjustment, which aims to preserve industries or to retain aspects of production which are uncompetitive, is self-defeating. In the short run, reactive adjustment reduces competitiveness of exports and increase prices of domestic goods. In the long run, entrepreneurs will find ways to import cheaper alternatives and will relocate inefficient production to other countries in order to retain international competitiveness.

Today, there is only one market, the global market, from which no country is isolated. Since all firms in small economies are small by global standards, their survival even in national markets will increasingly depend on strategic corporate alliances and 'constellations'. Companies have to be flexible, responsive, competitive, innovative, efficient and customer focused. The traditional hierarchical and pyramid-shaped organisation of corporations is too cumbersome and slow to respond effectively. This has prompted a process of 're-engineering', which entails the fundamental rethinking and radical design of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed. The fragmentation of transnational production processes into separate stages being undertaken in different countries and strategic corporate alliances have made it possible for networks of small firms to overcome the limitations of size and compete effectively against large corporations. Small firms can ensure their survival and profitability in the global economy by: (a) specialising in a single aspect of production or distribution; (b) capitalising on specific market niches where economies of scale are not a determinant of competitiveness; (c) flexible manufacturing specialisation; (d) concentrating on the economies of speed, which are now more important than the economies of scale; and (e) initiating strategic corporate alliances which make it possible for networks of small firms to overcome the limitations of size.

Increasingly, the world economy will be dominated by knowledge-based industries, especially services, making the quality of human capital a

critical factor. The productivity of labour (workers and managers) will have to be upgraded, and this means improvement in the quantity and quality of education. The importance of this is illustrated by the experience of the East Asian countries, where the expansion and transformation of education and training during the last three decades has been a key factor in their economic growth. Making the workforce more knowledgeable and productive involves better education both within the individual enterprise and in the society as a whole. Firms need to put more emphasis on vocational training and on-the-job education. The new technology of learning can help, for example multimedia training enables workers to learn faster and in more detail, particularly those workers who are functionally illiterate. In many developing countries, much of their human capital resides outside their borders. Every effort must be made to repatriate skilled nationals, as this is the quickest way to improve the quality of the workforce. Incentives and special programmes must be established to induce overseas nationals with professional skills to return home.

Globalisation involves continuous innovation and technological change. Firms in small developing countries cannot afford the enormous costs of research and development but they can realise opportunities in the global marketplace by the transfer and adaptation of knowledge. The capacity for absorption of knowledge and new technology requires the development of an appropriate national educational institutional infrastructure. Education will have to become the priority of governments, with an emphasis on increasing the scientific and technological component of education and the devotion of more resources to secondary and university level training. Much of the university level education will have to be undertaken overseas; the substantial cost involved, particularly for study at institutions in developed countries, is a significant impediment to the efforts of small developing countries to expand institutional capacity and research.

Multilateral policy response – special and differential treatment

The global economic environment must be complementary to the internal economic policies of small developing economies in order to ensure their growth, development and resilience. An integral part of the global economic situation will be the principles on which multilateral, regional and bilateral trade agreements are based. The appropriate principle is that of special and differential treatment which was widely recognised when the General Agreement on Tariffs and Trade (GATT) was established. This took the form of preferential access to developed country markets

through tariff preferences and exemptions from GATT rules. In 1965, the special status of developing countries in the multilateral trading system was established with the adoption of a new Part IV of the GATT, which embodied what was termed 'special and differential treatment'. Subsequently, the principle of special and differential treatment in the form of long-term, or transitional, non-reciprocity was embodied in several integration arrangements in the Western hemisphere. It is included in the Lomé Convention Caribbean Basin Initiative, CARIBCAN, the Andean Trade Preferences Act, the CARICOM, CARICOM–Venezuela Agreement and CARICOM–Columbia Agreement.

The design of measures to address the concerns and interests of small developing economies should not be limited to measures which avoid putting small economies at a disadvantage, but should be proactive in promoting the growth and development of smaller economies. For example, Article IV of the General Agreement on Trade in Services (GATS) specifies measures aimed at increasing the participation of developing countries in the global trade in services through specific commitments in relation to strengthening their domestic services and their efficiency, capacity and competitiveness. It also requires developed member countries to facilitate the access of developing country service suppliers to information related to market access.

Special and differential treatment of small developing economies includes:

- **Appropriate obligations**
  Smaller economies should be allowed to undertake commitments to the extent consistent with their adjustment capacity, development, financial and trade needs, and their administrative and institutional capabilities for implementation. These concessions should be negotiated on an issue-by-issue basis and, where appropriate, on a product-by-product basis. Small developing economies should also be permitted some exemptions. This would not only address the question of disparities, but also avoid situations where small, developing economies, despite their best efforts, are not able to meet certain requirements and timetables. For example if, as is likely, export subsidies are outlawed, smaller economies should be exempted from this requirement. Where complete exemptions are not feasible, *de minimus* provisions would be helpful.

- **Asymmetrically phased implementation timetables**
  Given the small size of firms in smaller economies, and the small scale of production and limited size of the market, export sectors will require a longer period of adjustment than larger firms and larger, more developed, economies. Hence, there must be asymmetrically phased

implementation of rules and disciplines, permitting a longer adjustment period for smaller economies. For example in agricultural trade, and in particular in food items, smaller economies should be allowed the flexibility to implement their commitments to reducing protection and domestic support over a longer period than the implementation period prescribed for larger economies.

Both larger and smaller economies should commit to best endeavors in implementation of special and differential treatment. Larger economies should, whenever possible, provide measures and accept timetables which provide easement to smaller economies. For example, careful regard should be given by developed countries to the peculiar situation of smaller economies when considering the imposition of anti-dumping duties. Larger, more developed economies should be required to explore the possibility of constructive remedies before imposing duties where these would affect the essential interests of smaller economies. Where flexibility is provided, there should be some criteria to assess the extent to which smaller economies are making adequate efforts. For example, when smaller economies have achieved 'export competitiveness' in a given product they should be expected to phase out concessions over an extended period.

- **Balance of payments adjustment mechanisms**
  Small economies are highly open economies and are therefore more susceptible to balance of payments problems. This is particularly the case for small developing countries where balance of payments deficits tend to be persistent because of their structural origins. Trade agreements should include balance of payment provisions such as those provided in Articles XII and XIII of the GATT. While all members may avail themselves of the right to resort to these provisions under the circumstances prescribed, small developing economies, because of their vulnerability to balance of payments problems, should be permitted additional facilities to enable them to maintain sufficient flexibility in their tariff structure and schedule of liberalisation to permit the establishment, stabilisation or rehabilitation of a particular industry, and to apply quantitative restrictions for balance of payments purposes which take full account of the high inelasticity of demand for imports and import surges.

- **Technical assistance for capacity-building**
  Small developing countries will have to improve their capacity to mediate the encounter with the global marketplace. Technical assistance for capacity-building should aim to:

- contribute to efforts by small economies to undertake structural, institutional and legislative adjustment;
- promote the development of adequate institutional capacity, including training, to improve their handling of negotiations and implementation of international trade agreements;
- assist small economies in fulfilling their obligations under the various international agreements, in particular, commitments under the WTO;
- ensure that small developing countries can overcome: (a) their limited capability to make use of the dispute settlement mechanism because of their inadequate expertise and institutional capacity to implement panel findings; and (b) the high cost and administrative difficulties of using the mechanism.

Financing

Strategic global repositioning, like structural adjustment, requires financing from both public and private sector sources. While facing the difficulties of lack of visibility and small market size, private sector investment needs can be met in part from inflows of private foreign investment. This is a realistic possibility given the enormous financial resources available in global capital markets, but it requires macroeconomic policies that provide stability and a business environment conducive to investment. Mobilising private capital is constrained by the fact that even with impeccable policies, small developing countries are perceived by private investors as more risky than large developing countries. Governments will have to upgrade and expand infrastructure and institutional capacity in a manner, and at a pace, which complements and supports private sector activity. Public sector investment on a scale necessary for successful strategic global repositioning may be beyond the capacity of governments to garner sufficient resources through local borrowing and taxation. Raising additional funds from external sources will be critical, particularly development financing. However, the financing needed for strategic global repositioning cannot be adequately met either by project-oriented bilateral development assistance or by structural adjustment lending by multilateral financial institutions, as neither is designed for this purpose. A new kind of long-term development financing facility should be explored to facilitate programmes of strategic global repositioning in small developing economies.

Multilateral financial institutions and bilateral development assistance agencies have focused almost exclusively on per capita income as a

criterion for classifying developing countries. This has resulted in the graduation from concessionary lending of many small developing countries. This is unfortunate since concessionary resources can increase public sector investment, help in attracting foreign direct investment and speed up the reallocation of resources. Lending criteria must be extended to include vulnerability and the constrained adjustment capacity which are characteristic of small developing economies, enabling them to become eligible for concessionary funds.

Concluding remarks

The Commonwealth Secretariat/World Bank Report does not adequately address the issue of how small developing countries can cope with globalisation in a way which facilitates reduced vulnerability, structural transformation and sustained economic development. The report advocates sound economic policies as the basis for an effective response to globalisation. However, internal economic management and reform is a necessary, but not sufficient, condition; it must be a part of a broader development strategy of strategic global repositioning. An integral aspect of this process is increased investment in infrastructure, productive capacity, institutional reform and education. Private investment, both national and foreign, must be supported by public sector investment. A substantial increase in the short run will require an infusion of resources from external sources. Strategic global repositioning must be complemented by action at the multilateral level, which must include special and differential treatment. Strategic global repositioning and special and differential treatment are complementary and integral aspects of a strategy to promote a successful response by small developing countries to the profound changes inherent in globalisation.

Small States: A Composite Vulnerability Index[1]

Jonathan P. Atkins, Sonia Mazzi and Christopher D. Easter

Introduction

There is growing international recognition that high economic exposure, remoteness and isolation, and proneness to natural disasters have a debilitating effect on small economies, despite their relatively high per capita incomes. The purpose of this paper is to present a composite vulnerability index designed to help identify vulnerable states. Such an index could be used as an operational tool in determining whether small states should be accorded differential treatment by the international development community. It is designed to augment the per capita income criterion in decision-making processes.

Vulnerability and small states

Vulnerability, in the context of small states, is widely believed to be associated with *exposure to external economic forces and environmental hazards*. In the Commonwealth Secretariat's 1997 report, *A Future for Small States: Overcoming Vulnerability*, it was argued that 'vulnerability is the consequence of two sets of factors: (1) the incidence and intensity of risk and threat; and (2) the ability to withstand risks and threats (*resistance*) and to "bounce back" from their consequences (*resilience*)'. Such threats were perceived to emanate from three main sources: economic exposure; remoteness and insularity; and proneness to natural disasters.

The UN has distinguished two important considerations in the notion of vulnerability. Firstly, it has distinguished between *economic vulnerability* and *ecological fragility*, recognising that economic vulnerability finds its origins partly in ecological factors (for example, cyclones). That is, vulnerability indices 'are meant to reflect relative economic and ecological susceptibility to exogenous shocks'. Secondly, it makes a distinction 'between *structural* vulnerability, which results from factors that are durably independent from the political will of countries, and the vulnerability deriving from economic policy, which results from choices made in a recent past, and is therefore *conjectural*'. Vulnerability indices should

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in St. Lucia in February 1999.

refer to 'structural vulnerability that depends on factors which are not under the control of national authorities when the shocks occur; the indicators should reflect exposure to shocks, that is to say, their magnitude and their probability'.[1]

It is evident from the 1997 Commonwealth report findings that small states face particular threats from economic shocks and natural disasters. Despite many of these countries having relatively high incomes in developing country terms, their capacity to deal with these frequent shocks is limited. Moreover, because of their small size, the shocks referred to affect a greater proportion of the population of small states and have a significantly larger economic impact. At the same time, because of their income levels, some small states face graduation from Least Developed Country (LDC) status. The consequence is a loss of differential treatment in terms of their special access to financial resources, markets and technical assistance from multilateral agencies and donors.

In the case of natural disasters, many small states are located in regions where, for example, there is high incidence of cyclones, hurricanes and volcanic activity. Some of them, such as Maldives, Kiribati and Tuvalu, are low-lying islands or atolls which face the prospect of marine inundation in the event of further global warming and rise in sea-levels. Some are volcanic and suffer the threat of obliteration which may result from serious eruptions.

Globalisation has brought increased trade and capital flows. While *openness* to the world economy can be a source of many economic benefits, an economy characterised, for example, by limited diversification and, possibly, a dependence on a single export, such as bananas, sugar, textiles or tourism to generate foreign exchange earnings, can find itself vulnerable to adverse external shocks. With the implementation of the Uruguay Round agreements, and the prospect of the Lomé IV Convention expiring in the year 2000, small states find themselves increasingly marginalised in this more competitive trade environment. Turning to capital flows, investment does not necessarily follow openness, and an economy accessing external financial resources may become exposed to the consequences of events in the international financial markets. However, capital movements may depend more on economic policies than do trade movements, and access to external financial resources (loans, grants and transfers) may offer insurance during adverse periods.

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[1]The quotations are from the United Nations, *Development of a vulnerability index for small states: Report to the Secretary General*, draft document, 1998; and *How to include an index of vulnerability in the criteria for identifying the LDCs*, draft document CDP12.98/WG3/3, 8 September 1998.

Given this interpretation, one might use a vulnerability index to select certain countries for the purpose of bringing them to the attention of the international community. Under such circumstances, the graduation policies of the international financial institutions could pay more explicit attention to the acute vulnerabilities of their smaller members. For example, a country's vulnerability could be considered alongside per capita GDP as a basis for graduation decisions with a view to assisting a vulnerable country to achieve greater resistance and resilience to external shocks. The multilateral agencies could also review the way in which their activities impact upon countries identified as being vulnerable. For example, the European Union could adopt measures that would protect the interests of such countries in the arrangements which replace the Lomé IV Convention. Again, such a targeted initiative might assist in developing the resistance and resilience of the vulnerable countries.

To provide an objective basis for such proposals, it becomes necessary to establish a sound case for the differential treatment of small states and to develop criteria which extend beyond the single income measure currently applied for assessing their eligibility for special measures. It is in this context that the composite vulnerability index has been developed.

The definition of small states and basis for sample selection

While it is recognised that there may be alternative bases for identifying and classifying a small state, in this report small states are defined as countries with a population of 1.5 million or less.[1] In addition, three somewhat larger states – Jamaica, Lesotho and Papua New Guinea – are included in the small state category since it may be argued that they share many of the physical and economic characteristics of small states. This categorisation is also consistent with that used in the Commonwealth Secretariat's 1997 report, *A Future for Small States: Overcoming Vulnerability*. On the basis of this definition, the sample of countries examined here comprises 37 small states and 74 large states. These are listed in Box 1.

For comparative purposes a sample of large countries was also selected. Selection of all of the sample countries was principally on the basis of

[1]Alternative measures of economic size which have been suggested are: total GNP, total population and total arable land. Earlier work at the Commonwealth Secretariat ('Classification of Economies by Size', Chapter 2 in B. Jalan (ed.), *Problems and Policies in Small Economies*, London: Croom Helm, 1982) showed that a composite index of all three indicators (unweighted) ranks countries in terms of size in much the same way as their ranking according to population alone. Hence, population can justifiably be used as a proxy for economic size, and ease of data availability provides further justification.

Box 1

Countries treated as 'small states' in this report

Thirty-four countries with a population of 1.5 million or less are considered as small states in this report along with three larger states which share many of the physical and economic characteristics of small states in their respective regions (Commonwealth members in italics).

Africa: *Botswana*, Cape Verde, Comoros, Djibouti, Equatorial Guinea, Gabon, *Gambia*, *Lesotho*, *Namibia*, São Tomé and Príncipe and *Swaziland* (11)

Caribbean: *Antigua & Barbuda*, *The Bahamas*, *Barbados*, *Belize*, *Dominica*, *Grenada*, *Guyana*, *St. Kitts-Nevis*, *St. Lucia*, *St. Vincent and the Grenadines*, *Jamaica*, Suriname and *Trinidad & Tobago* (13)

Pacific: *Fiji*, *Kiribati*, *Papua New Guinea*, *Samoa*, *Solomon Islands*, *Tonga* and *Vanuatu* (7)

Indian Ocean: *Maldives*, *Mauritius* and *Seychelles* (3)

Other Asia: Bahrain (1)

Mediterranean: *Cyprus* and *Malta* (2)

Countries treated as 'large states' in this report

Seventy-four countries with a population of more than 1.5 million are considered as large states in this report (Commonwealth members in italics).

Africa: Algeria, Angola, Benin, Burkina Faso, Burundi, *Cameroon*, Central African Republic, Chad, Congo, Côte d'Ivoire, Egypt, Ethiopia, *Ghana*, Guinea, *Kenya*, Libya, Madagascar, *Malawi*, Mali, Mauritania, Morocco, *Mozambique*, Niger, *Nigeria*, Rwanda, *South Africa*, Senegal, *Sierra Leone*, Sudan, *Tanzania*, Togo, Tunisia, *Uganda*, Zaire, *Zambia*, and *Zimbabwe* (36)

South and Central America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela (19)

Asia and Pacific: *Bangladesh*, Bhutan, China, *India*, Indonesia, Iran, Jordan, *Malaysia*, Myanmar, Nepal, Oman, *Pakistan*, Philippines, *Singapore*, *Sri Lanka*, Syria, Thailand, Turkey and Yemen (19)

data availability. Thus, for the purposes of the analysis, a number of small states have not been included in the sample due to a general scarcity of economic data; examples of such countries include Guinea Bissau, Nauru and Tuvalu. Inclusion in the sample was also determined by the political structure of the country, in the sense that dependent territories, such as Réunion, were not included in the sample. Further, Qatar and other oil-rich Gulf states (Kuwait, UAE, Saudi Arabia), the 'transition' economies (such as the CIS (Confederation of Independent States) of the former Soviet Union) and Hong Kong were specifically not included in the sample. While the exclusion of these states from the analysis may give some potential for sample selection bias, their inclusion would also bias the analysis in the sense that these economies have atypical and, in some cases transient, physical and/or economic characteristics.

Recent economic performance

An examination of the recent economic performance of small states indicates a number of important characteristics. Firstly, small states are a heterogeneous group in terms of per capita GNP – that is, while as a group they tend to have a higher per capita income than do large states, they appear among the poorest as well as the richest within the group of developing countries. Secondly, small states tend also to be a heterogeneous group in terms of growth in per capita GDP – some have appeared amongst the most successful developing countries and others amongst the least successful. Thirdly, small states are more homogeneous in terms of the volatility of per capita GDP growth over time,[1] having a tendency to experience a greater degree of volatility than do large states. It is this third characteristic of small states, a higher volatility of per capita GDP growth[2] (henceforth, output volatility), which is thought to be a

[1]Measured by the standard deviation of annual rates of growth of constant price GDP per head. The choice of per capita constant price (PPP) GDP growth as opposed to GDP growth is consistent with an underlying interest in the economic well-being of the population of an economy subject to vulnerability, and is also consistent with a focus, for evaluation purposes, on international comparisons. The choice of standard deviation, rather than the coefficient of variation (standard deviation divided by mean stated as a percentage), as a measure of volatility follows from the characteristics of the growth data. The coefficient of variation should be used only for datasets involving positive numbers; otherwise negative or very small values could be obtained for the mean, which leads to meaningless values for the coefficient of variation.

[2]On the choice of GDP, rather than GNP, for a number of Pacific countries, for example, GNP may effectively dwarf GDP due to a variety of factors. For some countries it may be the result of aid flows themselves (extremes could be the Marshall Islands and Federated States of Micronesia with flows under their Compact with the USA). For others it could be remittance incomes (possibly Tonga, Samoa, Kiribati, Tuvalu and others) and income from Trust Funds based on investment overseas of revenues from mineral exploitation in the past (Nauru, Kiribati, Tuvalu

manifestation of the greater vulnerability of small states compared with large states. An Index of Output Volatility is shown in Table 1.[1] This index has been used as the basis for establishing a composite vulnerability index.

A composite vulnerability index

A composite index is one that combines a number of separate variables to create a single indicator. A well-known example of a composite index is the Human Development Index produced annually by the UNDP (UN Development Programme). In the case of the Composite Vulnerability Index the indicators selected must reflect the external economic forces and environmental hazards that generate vulnerability. Once selected, these indicators are combined or aggregated using an appropriate set of weights. The methodology adopted here follows a two-stage procedure. First, since vulnerability has been linked to greater output volatility, an economic model is statistically determined which explains output volatility in terms of specified economic and environmental causes of vulnerability. Second, the model so developed will be used to predict individual vulnerability scores for all countries for which data are available. These vulnerability scores will form the Composite Vulnerability Index. Annex 2 provides a full and more technical discussion of the methodology.

The analysis which led to the index presented here involved a statistical explanation of output volatility based on determinants of vulnerability reflecting the three broad areas previously noted:

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are examples). Hence, volatility in growth in per capita GDP may not be such a robust and representative measure of vulnerability in so far as the impact is cushioned by these other flows. Conversely, there may be occasions when GDP is not showing much volatility but these income flows may do so (for example, because of the impact of a downturn on returns on investment (Asian financial crisis?). There are other factors which adversely affect assets owned overseas. Some years ago a cyclone in Guam severely and adversely affected a hotel owned by Nauru. Or there can be mismanagement of Trust Funds, a factor that has severely affected Nauru and caused it to seek loan assistance from the Asian Development Bank. Unfortunately, there are significant data problems in handling this issue – the GDP data themselves may not be particularly reliable for some small states and GNP data are likely not to be readily available, or not available at all. Thus, in the case particularly of some small island economies – some noted above are not contained in the sample – this limitation in adopting variability in per capita GDP growth as a manifestation of vulnerability needs to be noted. (We are grateful to David Edwards of the Asian Development Bank for advice on these matters.)

[1]The Index of Output Volatility is simply the standard deviation of annual rates of growth of PPP GDP for 111 countries, 1980–92.

Table 1. Index of Output Volatility for a Sample of 111 Developing Countries (*small states are shown in italics*)

Country	Population (000)	Output Volatility Index	Rank	Real per capita GDP (PPP$)	Rank
Kiribati	*78*	*16.60*	*1*	*1,475*	*32*
Chad	6,010	13.49	2	690	10
Antigua and Barbuda	*65*	*13.38*	*3*	*5,369*	*86*
Tonga	*93*	*13.18*	*4*	*3,740*	*73*
Guyana	*816*	*11.87*	*5*	*2,140*	*45*
Djibouti	*557*	*11.60*	*6*	*775*	*14*
Rwanda	7,554	11.42	7	740	13
Equatorial Guinea	*379*	*11.26*	*8*	*1,800*	*39*
Solomon Islands	*354*	*11.21*	*9*	*2,266*	*49*
Swaziland	*809*	*11.17*	*10*	*2,940*	*58*
Myanmar	44,596	10.48	11	650	7
Botswana	*1401*	*10.21*	*12*	*5,220*	*85*
Namibia	*1461*	*10.13*	*13*	*3,710*	*72*
Iran	64,169	10.11	14	5,380	87
Belize	*204*	*9.63*	*15*	*4,610*	*82*
Cape Verde	*370*	*9.08*	*16*	*1,820*	*41*
Congo	2,443	8.84	17	2,750	57
Trinidad and Tobago	*1,278*	*8.75*	*18*	*8,670*	*101*
Paraguay	4,701	8.32	19	3,340	67
Peru	22,886	8.32	19	3,320	66
Oman	1,992	7.77	21	10,420	104
Gambia	*1,042*	*7.67*	*22*	*1,190*	*27*
Gabon	*1,248*	*7.64*	*23*	*3,861*	*77*
Suriname	*414*	*7.56*	*24*	*3,670*	*70*
Bahamas	*268*	*7.37*	*25*	*16,180*	*110*
Jordan	4,936	7.03	26	4,380	80
Cameroon	12,522	7.01	27	2,220	48
Panama	2,538	7.00	28	5,890	93
Sierra Leone	4,297	6.93	29	860	18
Samoa	*167*	*6.92*	*30*	*3,000*	*59*
Grenada	*92*	*6.89*	*31*	*3,118*	*61*
Fiji	*758*	*6.84*	*32*	*5,530*	*89*
Syria	13,696	6.83	33	4,196	78
Mauritius	*1,091*	*6.72*	*34*	*12,510*	*107*
St. Lucia	*139*	*6.59*	*35*	*3,795*	*74*
Chile	13,822	6.58	36	8,900	102
Nigeria	105,264	6.48	37	1,540	33

Table 1 (continued)

Country	Population (000)	Output Volatility Index	Rank	Real per capita GDP (PPP$)	Rank
Uruguay	3,149	6.48	37	6,550	96
Zaire	41,231	6.39	39	300	1
Argentina	33,780	6.19	40	8,350	98
Dominica	*71*	*6.12*	*41*	*3,810*	*76*
Zimbabwe	10,739	6.12	41	2,100	43
St. Vincent	*11*	*6.08*	*43*	*3,552*	*69*
Togo	3,885	6.07	44	1,020	22
Yemen	13,196	6.07	44	1,600	34
Libya	5,048	6.05	46	6,125	94
Ethiopia	51,859	6.02	47	420	2
Tanzania	28,019	6.01	48	630	5
Sudan	26,641	5.98	49	1,350	30
St. Kitts-Nevis	*42*	*5.97*	*50*	*9,340*	*103*
Seychelles	*72*	*5.90*	*51*	*4,960*	*84*
Haiti	6,893	5.86	52	1,050	23
Benin	5,086	5.81	53	1,650	37
Venezuela	20,913	5.76	54	8,360	99
Dominican Republic	7,543	5.52	55	3,690	71
Ghana	16,446	5.52	55	2,000	42
Nicaragua	4,114	5.51	57	2,280	50
Mozambique	15,102	5.50	58	640	6
Côte d'Ivoire	13,316	5.36	59	1,620	36
Malaysia	19,247	5.29	60	8,360	99
Bahrain	*535*	*5.22*	*61*	*15,500*	*109*
Central African Rep.	3,156	5.10	62	1,050	23
Niger	8,550	5.10	62	790	16
Mexico	90,027	5.05	64	7,010	97
Papua New Guinea	*4,110*	*5.03*	*65*	*2,530*	*55*
China	1,196,360	4.84	66	2,330	51
Zambia	8,936	4.77	67	1,110	25
Malawi	10,520	4.65	68	710	12
Bangladesh	115,203	4.58	69	1,290	29
Mali	10,135	4.57	70	530	3
Morocco	25,945	4.52	71	3,270	64
Lesotho	*1,943*	*4.44*	*72*	*980*	*20*
Nepal	20,812	4.41	73	1,000	21

Table 1 (continued)

Country	Population (000)	Output Volatility Index	Rank	Real per capita GDP (PPP$)	Rank
Barbados	*260*	*4.34*	*74*	*10,570*	*105*
Mauritania	2,161	4.27	77	1,610	35
Brazil	156,486	4.25	78	5,500	88
São Tomé	*127*	*4.23*	*79*	*600*	*4*
Costa Rica	3,270	4.21	80	5,680	91
El Salvador	5,517	4.18	81	2,360	52
Guinea	6,306	4.04	82	1,800	39
Burundi	6,026	3.96	83	670	8
Turkey	59,597	3.88	84	4,210	79
Thailand	57,585	3.78	85	6,350	95
Uganda	19,940	3.78	85	910	19
Kenya	26,391	3.77	87	1,400	31
Vanuatu	*161*	*3.61*	*90*	*2,500*	*53*
Jamaica	*2,411*	*3.43*	*91*	*3,180*	*63*
South Africa	39,659	3.38	92	3,127	62
Madagascar	13,854	3.37	93	700	11
Singapore	2,821	3.35	94	19350	111
Sri Lanka	17,897	3.30	95	3,030	60
Guatemala	10,029	3.18	96	3,400	68
Maldives	*236*	*2.97*	*97*	*2,200*	*47*
Senegal	7,902	2.94	98	1,710	38
Ecuador	10,980	2.92	99	4,400	81
Angola	10,276	2.91	100	674	9
Egypt	60,319	2.90	101	3,800	75
Cyprus	*726*	*2.66*	*102*	*14,060*	*108*
Bolivia	7,063	2.61	103	2,510	54
Tunisia	8,570	2.52	104	4,950	83
Honduras	5,335	2.43	105	2,100	43
Comoros	*607*	*2.39*	*106*	*1,130*	*26*
Malta	*361*	*2.36*	*107*	*11,570*	*106*
Algeria	26,722	2.32	108	5,570	90
India	901,459	2.12	109	1,240	28
Pakistan	132,941	2.07	110	2,160	46
Colombia	33,985	1.59	111	5,790	92
Philippines	64,800	4.31	75	2,590	56
Bhutan	1,596	4.30	76	790	16

- **Economic exposure**
  This can be associated with an economy's trade and financial links with the international community, particularly dependence on international markets and susceptibility to external shocks. This economic exposure may be reflected in: trade openness and export concentration; capital openness and the degree of access to or reliance on external financial resource flows; dependence on the non-manufacturing sectors (services and tourism); and dependence on imports of key commodities (commercial energy).

- **Remoteness and insularity**
  While all economies have the potential to be integrated into the international economy, some economies, by virtue of their location combined, possibly, with their size, can be disadvantaged in terms of cost indivisibilities in foreign trade, delays and enhanced uncertainties. It is only possible to reflect such factors indirectly through international transport costs.[1]

- **Susceptibility to environmental events and hazards**
  All economies are prone, to varying degrees, to the effects of environmental events and hazards that are beyond their control. While the most severe impact will occur as a result of natural disasters, an economy may also be affected by less severe climatic events.

The analysis tested a wide range of variables (see Annex 1) and model formulations in search of an explanation of output volatility which was rational and consistent with economic concepts. At the same time it was recognised that many other factors, either non-measurable (such as those relating to government) or for which the data are currently not available for some or all of the sample countries (such as labour remittances), could have a profound influence on output volatility.

The statistically preferred specification of the model demonstrates that output volatility can be explained, in part as expected, by three highly significant factors: a country's openness, as measured by export dependence (the average exports of goods and non-factor services as a percentage of GDP);[2] its lack of diversification, as measured by the UNCTAD

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[1]See Briguglio, L. (1995). 'Small Island Developing States and their Economic Vulnerabilities', *World Development*, 23(9):1615–32; and Briguglio, L. (1997). 'Alternative Economic Vulnerability Indices for Developing Countries'. Report prepared for the United Nations.

[2]On the issue of coverage of this indicator, it encompasses exports associated with export promotion zones. Export promotion zones refer to export processing zones, which usually

diversification index;[1] and, for small states, its susceptibility to natural disasters, as measured by the proportion of the population affected by such events as estimated over a relatively long period of time. These are not too dissimilar to those indicators proposed by the UN Committee for Development Policy.[2] The Commonwealth's Composite Vulnerability Index is derived from these three variables using weighted least squares techniques applied to the cross-sectional data. The weights attached to each indicator to aggregate to a single index are determined directly from the estimation procedure, being the estimated coefficients of the model. More detail about the model selected is presented in Annex 2. Diagnostic variables indicate the significance of the results and diagnostic checks on the model ensured it was correctly specified.

The results

The Composite Vulnerability Index (CVI) developed clearly shows that, in general, small states are more vulnerable to external economic forces and environmental hazards than are large states. From Table 2 it can be seen that of the countries showing the 30 highest CVI scores all, except two, are small states. In contrast, the 30 lowest CVI scores correspond to

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involve local value added although most inputs are usually imported (that is, assembly type activities). Therefore, the exported product can only be a genuine export and would naturally be part of the export column in Table 6.3 (UNCTAD, *Handbook of International Trade and Development Statistics*, Geneva). However, 'pure re-exports' are totally different: goods that are dealt with (imported and re-exported) in transhipment zones, usually duty-free, do not fall under exports, even though the value added arising from the trading service is of course part of GDP, and will not be captured by this export dependence measure. (We are grateful to Pierre Encontre of UNCTAD for advice on this matter.)

[1]The UNCTAD index measures the diversification of merchandise exports and takes a higher value if these are *less* diversified.

[2]The UN Committee for Development Policy has recommended potential components of an Economic Vulnerability Index (as reported in 'How to include an index of vulnerability in the criteria for identifying the LDCs?', draft document CDP12.98/WG3/3, 8 September 1998). For vulnerability to external shocks they recommend 'an index of export concentration for goods and services weighted with the share of such exports in GDP, or better (inasmuch as the extended concentration index asked from UNCTAD is not available) an index of instability in exports of goods and services weighted with the share of such exports in GDP'. It is suggested that one could conceive of a component to assess vulnerability with respect to capital movements, but that capital instability depends more on the economic policies followed than is the case with trade. For vulnerability arising from natural or ecological factors the committee recommends 'an indicator of risk of natural catastrophes drawn up on the basis of an index of the frequency of such catastrophes (measured over a long period of time) and weighted by the average proportion of the population affected'.

Table 2. The Composite Vulnerability Index and Other Indices Ordered According to Vulnerability Score for 111 Developing Countries (*small states are shown in italics*)

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Vanuatu	*161*	*2,500*	*53*	*3.61*	*90*	*13.295*	*1*
Antigua and Barbuda	*65*	*5,369*	*86*	*13.38*	*3*	*11.246*	*2*
Tonga	*93*	*3,740*	*73*	*13.18*	*4*	*10.439*	*3*
Bahamas	*268*	*16,180*	*110*	*7.37*	*25*	*10.433*	*4*
Botswana	*1,401*	*5,220*	*85*	*10.21*	*12*	*10.158*	*5*
Swaziland	*809*	*2,940*	*58*	*11.17*	*10*	*9.633*	*6*
Gambia	*1,042*	*1,190*	*27*	*7.67*	*22*	*9.331*	*7*
Fiji	*758*	*5,530*	*89*	*6.84*	*32*	*8.888*	*8*
Maldives	*236*	*2,200*	*47*	*2.97*	*97*	*8.654*	*9*
Singapore	2,821	19,350	111	3.35	94	8.651	10
Solomon Islands	*354*	*2,266*	*49*	*11.21*	*9*	*8.398*	*11*
Dominica	*71*	*3,810*	*76*	*6.12*	*41*	*8.122*	*12*
Guyana	*816*	*2,140*	*45*	*11.87*	*5*	*7.953*	*13*
Djibouti	*557*	*775*	*14*	*11.6*	*6*	*7.932*	*14*
Grenada	*92*	*3,118*	*61*	*6.89*	*31*	*7.848*	*15*
Bahrain	*535*	*15,500*	*109*	*5.22*	*61*	*7.748*	*16*
São Tomé	*127*	*600*	*4*	*4.23*	*79*	*7.690*	*17*
Jamaica	*2,411*	*3,180*	*63*	*3.43*	*91*	*7.484*	*18*
St. Lucia	*139*	*3,795*	*74*	*6.59*	*35*	*7.449*	*19*
Samoa	*167*	*3,000*	*59*	*6.92*	*30*	*7.371*	*20*
Equatorial Guinea	*379*	*1,800*	*39*	*11.26*	*8*	*7.029*	*21*
Malta	*361*	*11,570*	*106*	*2.36*	*107*	*6.857*	*22*
Belize	*204*	*4,610*	*82*	*9.63*	*15*	*6.652*	*23*
St. Vincent	*11*	*3,55*	*269*	*6.08*	*43*	*6.563*	*24*
Libya	5,048	6,125	94	6.05	46	6.536	25
Namibia	*1,461*	*3,710*	*72*	*10.13*	*13*	*6.527*	*26*
Mauritius	*1,091*	*12,510*	*107*	*6.72*	*34*	*6.510*	*27*
Seychelles	*72*	*4,960*	*84*	*5.9*	*51*	*6.375*	*28*
St. Kitts-Nevis	*42*	*9,340*	*103*	*5.97*	*50*	*6.362*	*29*
Papua New Guinea	*4,110*	*2,530*	*55*	*5.03*	*65*	*6.308*	*30*
Angola	10,276	674	9	2.91	100	6.282	31
Gabon	*1,248*	*3,861*	*77*	*7.64*	*23*	*6.229*	*32*
Mauritania	2,161	1,610	35	4.27	77	6.068	33
Lesotho	*1,943*	*980*	*20*	*4.44*	*72*	*5.985*	*34*
Congo	2,443	2,750	57	8.84	17	5.961	35

Table 2 (continued)

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Malaysia	19,247	8,360	99	5.29	60	5.903	36
Jordan	4,936	4,380	80	7.03	26	5.743	37
Barbados	*260*	*10,570*	*105*	*4.34*	*74*	*5.670*	*38*
Côte d'Ivoire	13,316	1,620	36	5.36	59	5.626	39
Oman	1,992	10,420	104	7.77	21	5.582	40
Zambia	8,936	1,110	25	4.77	67	5.549	41
Cyprus	*726*	*14,060*	*108*	*2.66*	*102*	*5.474*	*42*
Comoros	*607*	*1,130*	*26*	*2.39*	*106*	*5.425*	*43*
Nigeria	105,264	1,540	33	6.48	37	5.416	44
Bhutan	1,596	790	16	4.3	76	5.390	45
Honduras	5,335	2,100	43	2.43	105	5.373	46
Paraguay	4,701	3,340	67	8.32	19	5.346	47
Guinea	6,306	1,800	39	4.04	82	5.282	48
Trinidad and Tobago	*1,278*	*8,670*	*101*	*8.75*	*18*	*5.264*	*49*
Yemen	13,196	1,600	34	6.07	44	5.259	50
Togo	3,885	1,020	22	6.07	44	5.248	51
Malawi	10,520	710	12	4.65	68	5.200	52
Algeria	26,722	5,570	90	2.32	108	5.198	53
Congo, D. R.	41,231	300	1	6.39	39	5.186	54
Nepal	20,812	1,000	21	4.4	173	5.173	55
Chad	6,010	690	10	13.49	2	5.120	56
Costa Rica	3,270	5,680	91	4.21	80	5.090	57
Mali	10,135	530	3	4.57	70	5.083	58
Kiribati	*78*	*1,475*	*32*	*16.6*	*1*	*5.082*	*59*
Sri Lanka	17,897	3,030	60	3.3	95	5.076	60
Tunisia	8,570	4,950	83	2.52	104	5.060	61
Sierra Leone	4,297	860	18	6.93	29	5.060	61
Benin	5,086	1,650	37	5.81	53	5.060	61
Ecuador	10,980	4,400	81	2.92	99	5.050	64
Ghana	16,446	2,000	42	5.52	55	5.044	65
Tanzania	28,019	630	5	6.01	48	5.035	66
Senegal	7,902	1,710	38	2.94	98	5.026	67
Chile	13,822	8,900	102	6.58	36	5.016	68
Panama	2,538	5,890	93	7	28	4.995	69
Iran	64,169	5,380	87	10.11	14	4.976	70
Zimbabwe	10,739	2,100	43	6.12	41	4.969	71
Niger	8,550	790	16	5.1	62	4.957	72

Table 2 (continued)

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Cape Verde	*370*	*1,820*	*41*	*9.08*	*16*	*4.956*	*73*
Cameroon	12,522	2,220	48	7.01	27	4.952	74
Kenya	26,391	1,400	31	3.77	87	4.935	75
Burundi	6,026	670	8	3.96	83	4.929	76
Burkina Faso	9,772	780	15	3.73	89	4.923	77
Suriname	*414*	*3,670*	*70*	*7.56*	*24*	*4.921*	*78*
Nicaragua	4,114	2,280	50	5.51	57	4.920	79
Mozambique	15,102	640	6	5.5	58	4.907	80
Venezuela	20,913	8,360	99	5.76	54	4.887	81
Uganda	19,940	910	19	3.78	85	4.876	82
Dominican Rep.	7,543	3,690	71	5.52	55	4.858	83
Syria	13,696	4,196	78	6.83	33	4.830	84
Central African Rep.	3,156	1,050	23	5.1	62	4.802	85
Rwanda	7,554	740	13	11.42	7	4.797	86
Pakistan	132,941	2,160	46	2.07	110	4.795	87
Ethiopia	51,859	420	2	6.02	47	4.786	88
Madagascar	13,854	700	11	3.37	93	4.785	89
Morocco	25,945	3,270	64	4.52	71	4.772	90
Bangladesh	115,203	1,290	29	4.58	69	4.744	91
Egypt	60,319	3,800	75	2.9	101	4.723	92
Bolivia	7,063	2,510	54	2.61	103	4.691	93
Sudan	26,641	1,350	30	5.98	49	4.655	94
Philippines	64,800	2,590	56	4.31	75	4.595	95
Haiti	6,893	1,050	23	5.86	52	4.474	96
Peru	22,886	3,320	66	8.32	19	4.461	97
El Salvador	5,517	2,360	52	4.18	81	4.434	98
Guatemala	10,029	3,400	68	3.18	96	4.431	99
Myanmar	44,596	650	7	10.48	11	4.392	100
Uruguay	3,149	6,550	96	6.48	37	4.378	101
Indonesia	191,671	3,270	64	3.76	88	4.301	102
Thailand	57,585	6,350	95	3.78	85	4.264	103
South Africa	39,659	3,127	62	3.38	92	4.222	104
Colombia	33,985	5,790	92	1.59	111	4.078	105
Turkey	59,597	4,210	79	3.88	84	4.076	106
India	901,459	1,240	28	2.12	109	3.782	107
China	1,196,360	2,330	51	4.84	66	3.744	108
Argentina	33,780	8,350	98	6.19	40	3.539	109
Brazil	156,486	5,500	88	4.25	78	3.433	110
Mexico	90,027	7,010	97	5.05	64	3.194	111

large states.[1] Population, per capita GDP and the Output Volatility Index, with individual country rankings, are also presented in the table. The elements of the CVI for each of the 111 countries are shown in Table 6 (Annex 3).

Ranking countries by their vulnerability using the CVI shows that Vanuatu – a small state currently facing graduation from LDC status – is predicted to be the most vulnerable of the 111 large and small countries examined. Its level of per capita GDP is also relatively low and the country is highly susceptible to natural disasters. Such evidence seems powerful in arguing a case against graduation. A further observation from the table is that Antigua and Barbuda, which is on the threshold of graduation from the International Bank of Reconstrution and Development (IBRD), ranks as the second most vulnerable country and registers the third highest output volatility index score.

Importantly, the degree of vulnerability is independent of income (per capita GDP). For example, the results demonstrate that small countries such as the Bahamas and Malta, with relatively high per capita incomes, are much more vulnerable than low-income, large states such as Kenya and Madagascar. Hence, the question is whether a vulnerable small state has the resilience to cope with the factors which create its output growth volatility, in terms of its own resources, capacity and capabilities.

Interpretation

As suggested above, a most striking feature of the CVI table is that 28 of the 30 countries showing the highest CVI scores are small states and all 30 of the countries with the lowest CVI scores are large states. The top five CVI scores correspond to Vanuatu, Antigua and Barbuda, Tonga, Bahamas and Botswana.[2,3] These are discussed individually below, making

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[1]The CVI presented here is based on more recent evidence than that used to compute the CVI presented at the first meeting of the Joint Commonwealth Secretariat/World Bank Task Force on Small States. Specifically, more recent observations on export dependence and the UNCTAD diversification index have been used. While there are a number of repositionings in vulnerability rankings resulting from the update, the most noteworthy change is that the least vulnerable small state is now Suriname, a status held by Cape Verde in the earlier version of the index.

[2]Along with Vanuatu and Tonga, other Pacific islands categorised as small that have predicted CVI scores within the highest 30 include Fiji, Solomon Islands, Samoa and Papua New Guinea. In addition, the small Indian Ocean islands of Maldives, Mauritius and Seychelles have CVI scores within this group.

[3]Along with Antigua and Barbuda, and Bahamas, other Caribbean islands categorised as small that have predicted CVI scores within the highest 30 include Dominica, Grenada, Jamaica, St. Lucia, St. Vincent and St. Kitts-Nevis. In addition, the small states of Guyana and Belize have CVI scores within this group.

reference to the evidence in Table 2 and Table 6 (Annex 3).

Vanuatu, with a CVI score of 13.295, is predicted to be the most vulnerable state in the sample in the context of the factors that produced its output volatility that were considered in this study. Having a relatively high export dependence (58.5 per cent) and a high diversification index (0.902), the latter suggesting a substantial degree of concentration, its economy is highly exposed to external economic shocks. However, Vanuatu is particularly vulnerable to natural disasters – many of its islands are active volcanoes and it is susceptible to cyclones. With a natural disaster record of 727.17, its population is the most affected by such disasters of all the states covered in the sample. However, the Output Volatility Index (OVI) score is 3.61 which places it at a rank of 90, and is indicative of little observed variability in per capita GDP growth.[1]

Antigua and Barbuda, Tonga, the Bahamas and Botswana all share high levels of output volatility, a very high degree of susceptibility to natural disasters and high diversification index scores. However, while Antigua and Barbuda and Botswana demonstrate a high level of export dependence, Tonga and the Bahamas do not. In the latter case, the absolute value of the Bahamas exports is high which, together with export concentration, can lead to relatively greater impacts from external shocks, explaining its predicted vulnerability despite its high real per capita income. The same may be true of Botswana with its dependence on mineral and agricultural exports, which face relatively volatile prices in international markets. For Antigua and Barbuda, and Tonga, which have much lower levels of exports, it is the factors other than openness that lead to vulnerability.

It should be noted that the natural disasters component of the index is based on historical evidence and takes no account of future events associated, say, with global warming and sea-level rise. If this component could be forward-looking then a country such as Maldives, with a very low incidence of natural disasters in the past, as measured by the percentage of population affected, might have recorded a much higher level of vulnerability. Nevertheless, with a high export dependence and highly concentrated merchandise exports it is predicted to be highly vulnerable (rank 9).

Singapore, classified as a large country, ranks tenth most vulnerable in terms of its CVI score and also exhibits a high OVI score (rank 12). Its predicted level of vulnerability is attributable to its very high level of

[1]Annex 2 notes that Vanuatu was excluded from the analysis used to determine the composition of the Composite Vulnerability Index because of its extreme observation in susceptibility to natural disasters. This might in part explain the discrepancy between its CVI and OVI ranking.

export dependence (176 per cent), by far the highest level in the sample of 111 countries investigated. This leads to a high level of vulnerability despite a very high level of merchandise export diversification (a low diversification index value of 0.491). Clearly such a great reliance on the international markets does expose the economy to factors which are beyond its control, thereby leaving it vulnerable. Its output growth volatility may, in part, be due to this. However, this export-oriented and diversified economy has clearly benefited from export promotion policies since it has the highest per capita income of all the sampled countries.[1] Given the position of a high-income country such as Singapore, in terms of its CVI and OVI scores and ranking, it should be pointed out that these indices are designed to evaluate vulnerability, which is not meant to be interpreted as a measure of LDC status.

Although Suriname, Cape Verde, Kiribati, Trinidad and Tobago, and Comoros emerge as the five small states with the lowest CVI scores, none are low scores when compared with the whole sample. Suriname is estimated to experience the least vulnerability of all small states, ranking 78 out of 111. While Suriname's merchandise exports are not highly diversified (0.933) and are therefore vulnerable, it has a low export dependency ratio (12 per cent), and its population has not been affected by natural disasters. The African island state of Cape Verde is estimated to experience relatively low vulnerability when compared to other small states because, while it has suffered severe droughts in the past, its vulnerability to natural disasters is not very large (12.86), it records a relatively low dependency on exports (the ratio of exports of goods and services is 16 per cent) and its merchandise exports are not especially concentrated according to the UNCTAD Diversification Index (0.865).

Kiribati, Trinidad and Tobago, and Comoros, all island states, are little affected by, or are free from, natural disasters. Kiribati and Comoros also share other characteristics of Suriname and Cape Verde, in that they have extremely low dependence on exports but very high degrees of export concentration. However, whereas Suriname has a very high level of volatility in per capita GDP growth, that in Comoros is amongst the lowest. This could be a reflection of Comoros's dependence on France in its mainly agricultural trade (particularly vanilla, copra and cloves) and aid. Trinidad and Tobago reveals a reasonable degree of diversification

[1]It is interesting to note that Singapore did not fit well in the study sample, exhibiting outlying behaviour in relation to many of the variables analysed. As a result, like Vanuatu, Singapore was excluded from the analysis used to determine the composition of the Composite Vulnerability Index (see Annex 2).

and a moderate level of export dependence. Trinidad and Tobago's very high OVI ranking (18) may be explained by its dependence on exports in markets subject to price volatility, particularly the oil market.

Finally, the five large states predicted to have the lowest CVI scores are India, China, Argentina, Brazil and Mexico. These are all characterised by very large diversified economies with, consequently, diversified merchandise exports and low levels of export dependence. While natural disasters may strike – sometimes with tragic consequences – low proportions of the population are affected. Haiti, the poorest republic in the Caribbean and defined here as a large state, has a relatively low CVI (rank 96). It is susceptible to natural disasters but because of its size this appears not to markedly impact on output volatility. Haiti's isolation from the international economy and associated shocks (it has one of the least open economies in the sample, with an export dependence of 8.5 per cent) further accounts for its relatively low vulnerability ranking – lower than might otherwise be expected.

Conclusion

To conclude, this paper has both demonstrated the feasibility of constructing an index of vulnerability to reflect the excess volatility in output growth and has highlighted the susceptibility of small states, in particular, to external economic forces and environmental hazards. The index is based on sound economic precepts and appropriate statistical procedures. As such, it could be used as an analytical and operational tool in assessing the case for special and differential treatment of vulnerable small states by the international community. The index might be applied in conjunction with other measures currently applied by international agencies and governments in order to broaden the single – income – criterion which has dominated eligibility for differential measures until now.

Environmental Vulnerability Index

A composite vulnerability index has also been developed. This combines into a single index deforestation, population pressure, water scarcity, marine inundation, threats to biodiversity and the incidence of natural disasters. This index covered a sample of 106 small and large countries. According to the results, with the exception of Bangladesh, the most vulnerable ten countries are small states. This category includes Seychelles (on the threshold of IBRD graduation) and Barbados, which has already graduated.

Annex 1. Sources and Definitions of the Data

REAL PER CAPITA GDP RANKING

Real per capita GDP

Formula: Converted into US dollars on the basis of the purchasing power parity (PPP) of the country's currency.
Period: 1993
Source: Human Development Report 1996

OUTPUT VOLATILITY INDEX

Output volatility

Symbol: *outvol*
Formula: Standard deviation of annual rates of growth of constant price (PPP) GDP per capita
Period: 1980–1992
Source: Penn (Summers and Heston) data base (available on the Internet)

Average annual GDP growth rate

Formula: The annual percentage change in real GDP per head
Period: 1980–1992
Source: Penn (Summers and Heston) data base (available on the Internet)

COMPOSITE VULNERABILITY INDEX

Trade openness

Symbol: *topen*
Formula: Average of imports and exports of goods and non-factor services as a percentage of GDP
Period: 1990–1994
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Export Dependence

Symbol: *exdep*
Formula: Average exports of goods and non-factor services as a percentage of GDP
Period: 1991–1995
Source: UNCTAD, Handbook of International Trade and Development Statistics 1996

Merchandise export concentration index

Symbol: *conc*
Formula: UNCTAD's concentration index
Period: 1994 (most countries)

Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Merchandise export concentration index weighted by ratio of merchandise exports to GDP

Symbol: *concadj*
Formula: UNCTAD's concentration index weighted by ratio of merchandise exports to GDP
Period: 1994 (most countries)
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Merchandise export diversification

Symbol: *diver*
Formula: UNCTAD's diversification index
Period: 1995 (most countries)
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Merchandise export diversification index weighted by ratio of merchandise exports to GDP

Symbol: *diveradj*
Formula: UNCTAD's diversification index weighted by ratio of merchandise exports to GDP
Period: 1994 (most countries)
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Share of top three major exports and services in total exports of goods and services

Symbol: *Expdiv*
Formula: Share of top three major exports and services in total exports of goods and services
Period: 1995
Source: UN, Calculation of Preliminary Economic Diversification Indices for the Committee for Development Policy, mimeo: CDP12.98/WG3/12, 13 November 1998

Exports earnings instability

Symbol: *expinsth*
Formula: It is measured following the procedure of the Commonwealth Secretariat (1997) as the coefficient of variation.
Period: 1990–1994
Source: IMF, International Financial Statistics Yearbook 1997

Capital openness
Symbol: *capop*
Formula: Average of imports less exports of goods and non-factor services as a percentage of GDP
Period: 1990–1994
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Capital openness
Symbol: *capop*
Formula: Net international financial flows (sum of official unrequited transfers, direct investment and other long term and other short term capital) as percentage of GDP
Period: 1990–1993 (most countries)
Source: IMF, International Financial Statistics Yearbook 1994 (Part 1)

Capital openness
Symbol: *insav*
Formula: Investment less savings as percentage of GDP
Period: 1990–1993 (most countries)
Source: IMF, International Financial Statistics Yearbook 1996

Net Transfers on Debt
Symbol: *debttrans*
Formula: Net transfers on debt as percentage of GNP
Period: 1992–1996
Source: World Bank, Global Development Finance 1998

Debt as a percentage of GNP
Symbol: *debtgnp*
Formula: All debt as percentage of GNP
Period: 1992–1994 (most countries)
Source: IMF, World Debt Tables 1996

Debt as a percentage of exports of goods and services
Symbol: *debtexp*
Formula: All debt as percentage exports of goods and services
Period: 1994 (most countries)
Source: World Development Report 1996

Debt service as a percentage of exports of goods and services
Symbol: *dserveexp*
Formula: Average of all debt as a percentage of goods and services
Period: 1992–1994
Source: World Development Report (various issues); Commonwealth Secretariat, Economic Review and Basic Statistics (various issues)

Long term debt as a percentage of GNP
Symbol: *ltdebtgnp*
Formula: Long term debt as percentage of GNP
Period: 1992–1994
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Long term debt as a percentage of exports of goods and services
Symbol: *ltdebtexp*
Formula: Long term debt as percentage exports of goods and services
Period: 1992–1994
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Share of manufacturing and modern private services
Symbol: SMMPS
Formula: Share of manufacturing and modern private services
Period: 1995
Source: UN, Calculation of Preliminary Economic Diversification Indices for the Committee for Development Policy, Mimeo: CDP12.98/WG3/12, 13 November 1998

Service exports as a percentage of all exports of goods and services
Symbol: *intspec*
Formula: Average service exports as a percentage of exports of all goods and services
Period: Various – late 1980s and early 1990s (three year average)
Source: IMF, International Financial Statistics Yearbook 1997; IMF, Balance of Payments Yearbook 1997

Service exports minus imports plus remittances as a percentage of GDP
Symbol: *intspec2*
Formula: Average service exports minus imports plus remittances as a percentage of GDP
Period: Various – late 1980s and early 1990s (three year average)
Source: IMF, International Financial Statistics Yearbook 1997; IMF, Balance of Payments Yearbook 1997

Service exports as a percentage of GDP
Symbol: *intspe3*
Formula: Average service exports as a percentage of GDP
Period: Various – late 1980s and early 1990s (three year average)
Source: IMF, International Financial Statistics Yearbook 1997; IMF, Balance of Payments Yearbook 1997

Tourism receipts as a percentage of GDP
Symbol: *tourism*
Formula: Average of tourism receipts as a percentage of GDP
Period: 1992–1994
Source: Euromonitor, The World Economic Factbook 1996; Commonwealth Secretariat, Economic Review and Basic Statistics (various issues); World Bank, World Development Report (various issues)

Energy consumption
Symbol: *Energy*
Formula: Total energy consumption per capita
Period: 1995
Source: UN, Calculation of Preliminary Economic Diversification Indices for the Committee for Development Policy, Mimeo: CDP12.98/WG3/12, 13 November 1998

Commercial energy imports dependence
Symbol: *enerdep*
Formula: Average of imports of commercial energy as a percentage of domestic energy production and imports
Period: 1991–1994
Source: United Nations, Energy Statistics Yearbook 1994

c.i.f./f.o.b. conversion factor
Symbol: *cif*
Formula: Average of c.i.f./f.o.b. conversion factor
Period: 1990–1995 (most countries)
Source: IMF, International Financial Statistics Yearbook 1996

Freight and insurance
Symbol: *freight*
Formula: Freight and insurance debits as a percentage of merchandise exports
Period: 1992–1994
Source: UNCTAD, Handbook of International Trade and Development Statistics 1995

Vulnerability to natural disasters
Symbol: *vuln*
Formula: Per cent of population affected by natural disasters
Period: 1970–1996
Source: EM-DAT data set; Wells (*op. cit.*)

Agriculture's share of GDP

Symbol: *agric*
Formula: Average of agriculture's share of GDP
Period: 1991–1995
Source: World Bank, World Development Report (various issues); UNCTAD, Handbook of International Trade and Development Statistics 1995; World Bank, World Bank Atlas (various issues); Commonwealth Secretariat, Economic Review and Basic Statistics (various issues)

Money as a percentage of GDP

Symbol: *money*
Formula: Money and quasi money as a percentage of GDP
Period: 1995
Source: World Bank, World Bank Atlas 1997

Annex 2. Estimation of a Composite Vulnerability Index

The construction of the Composite Vulnerability Index followed a two-stage procedure. Firstly, since vulnerability has been linked to output volatility, an economic model is statistically determined which explains output volatility in terms of specified economic and environmental causes of vulnerability. Secondly, the model so developed is then used to predict individual vulnerability scores for all sample countries for which data are available. These individual vulnerability scores will form the Composite Vulnerability Index.

Deriving the Composite Vulnerability Index in this manner has a number of important advantages:

- it allows the index to be directly linked to output volatility which is consistent with the fundamental premise advanced in this report;
- it is based on well-known and understood statistical procedures;
- 'raw' data are used and, thus, the need to normalise data before aggregation is removed;[1]
- no further procedure is necessary to determine the weights used to aggregate the various components of the composite index – these are estimated directly from the data in the first stage.

Analysis

The objective of the first stage of the analysis is to build a stochastic model explaining output volatility. The general approach for model building is to think of output volatility as a linear combination of variables associated with vulnerability plus a stochastic error term. The variables are chosen so that different aspects of vulnerability, identified as being potential causes of output volatility, are represented in the model. The conceptual model is shown in Box 2 with variables tested detailed in Annex 1.

From the point of view of constructing the model, three over-riding considerations need to be highlighted. Firstly, the statistical methodology used to fit the model of output volatility for the sample of small and large countries is based on minimising a 'weighted least squares' criterion. The reason for using weighted least squares instead of ordinary least squares is that output volatility has been shown to have different distributional

[1]Normalisation procedures commonly adopted often lead to non-linear transformations of the data and can lead to extreme observations being highly influential in determining outcomes.

Box 2
A Conceptual Model of Output Volatility

Output volatility	=	Economic exposure	+	Remoteness and insularity	+	Susceptibility to environmental events and hazards	+	error term

properties for small and large countries.[1] Using the weighted least squares procedure will allow the different variance properties of output volatility for small and large countries to be reflected in the model.

Secondly, in addition to revealing different variances, output volatility may present a different profile for small and large countries. Given the exploratory data analysis presented in earlier reports[2] it is possible that the variables affect output volatility in a different manner for small and large countries. This hypothesis must be considered in our model fitting procedure and for that reason it is necessary to define a 'categorical variable' *D* for use in the model which takes the value *one* if the country is small and *zero* otherwise.

Thirdly, least squares techniques are very sensitive to large departures of data from the bulk. That is, if the sample contains an extreme observation this single observation can be highly influential in determining the relationship between the given variable and output volatility predicted by the model. Thus, in order to avoid a few countries influencing the entire model fitting procedure and biasing the results, possible influential points have to be detected and countries associated with these points excluded from the model estimation procedure.[3] The method adopted for this follows standard econometric graphical procedures, and utilises boxplots

[1]See Table 1 and Figure 5 of Atkins, J., Mazzi, S. and Ramlogan, C. *A Study of the Vulnerability of Developing and Island States: A Composite Index*. Draft report prepared for the Commonwealth Secretariat, London, August 1998.

[2]See Sections II and V of Atkins, J., Mazzi, S. and Ramlogan, C. (1998).

[3]Of the initial 111 developing countries it was decided to exclude the data corresponding to 11 countries in order to carry out the computations; this avoided a few countries influencing the entire model fitting results. For example, Chad, Myanmar, Iran and Rwanda were observed to have extreme values of output volatility. Using the data of these countries in the estimation procedure would produce inflated estimates of the variance of output volatility of large countries. Thus, to avoid this outcome, these four countries were excluded from the estimation procedure. The 11 countries excluded from the analysis consisted of five small states – Bahrain, Kiribati, Maldives, Malta and Vanuatu – and six large states – Chad, Mexico, Myanmar, Iran, Rwanda and Singapore.

and bivariate plots. Note that the countries not included in the fitting of the model can be included in the composite index.

Weighted least squares results for the preferred model specification

After substantial testing using the variables specified in Annex 1, the preferred model specification was given by using susceptibility to natural disasters ($Vuln_i.D_i$), export dependence ($Exdep_i$) and UNCTAD's merchandise export diversification index (Div_i) as explanators of output volatility ($Outvol_i$). This estimated combination was preferred in the sense that it appeared to be most interpretable in economic terms and it resulted in the best statistical explanation of the variability of output volatility. The model was thus specified as:

$$\text{Outvol}_i = \beta_0 + \beta_1 \text{Vuln}_i.D_i + \beta_2 \text{Exdep}_i + \beta_3 \text{Div}_i + \varepsilon_i \quad (1)$$

and where: i = 1, ... , N, and N is the number of countries that enter the sample; and the error terms ε_i are assumed to be uncorrelated with mean of zero and with

$\text{Var}(\varepsilon_i) = \omega^2_S \sigma^2$, if $D_i = 1$, and $\text{Var}(\varepsilon_i) = \omega^2_L \sigma^2$ otherwise.

Estimating the weights ω_S and ω_L

In order to estimate ω_S and ω_L separate regressions for small and large countries were required. The results presented in Tables 3 and 4 show that the estimate for ω_S is 2.5459 and for ω_L is 1.6246. Whilst these two equations were auxiliary in order to derive the required weights, it is noteworthy that the regression results are far more significant for the small than for the large countries. This may be due to the fact that there is a substantial heterogeneity in the sample of large countries which contributes to more unexplained variation. The regression results for the preferred model are given in Table 5.

Table 3. Least Squares Regression Results for Small States

	Coefficient	Standard error	t-statistic	p-value[1]
Intercept	-9.7624	7.9407	-1.2294	0.2291
Vuln	0.0074	0.0029	2.5461	0.0167
Exdep	0.0615	0.0256	2.3976	0.0234
Div	15.2609	8.5089	1.7935	0.0837

Number of observations = 32; ω_s= 2.5459; Multiple R^2 = 0.3506
F-statistic = 5.0389 (on 3 and 28 degrees of freedom), p-value = 0.0064

[1]p-values corresponding to the t-statistics which are used to test the statistical significance of the parameters. Note that the p-value, being a probability, takes values between zero and one and the lower the p-value, the higher the significance of the parameter.

Table 4. Least Squares Regression Results for Large States

	Coefficient	Standard error	t-statistic	p-value
Intercept	2.3170	1.4026	1.6519	0.1034
Exdep	0.0201	0.0141	1.4280	0.1581
Div	2.5456	1.6288	1.5629	0.1229

Number of observations = 68; ω_L = 1.6246; Multiple R^2 = 0.0588
F-statistic = 2.0299 (on 2 and 65 degrees of freedom), p-value = 0.1396

Table 5. Weighted Least Squares Regression Results for All States

	Coefficient	Standard error	t-statistic	p-value
Intercept	1.4142	1.3372	1.0576	0.2929
Vuln.D	0.0096	0.0023	4.0896	0.0001
Exdep	0.0322	0.0115	2.8043	0.0061
Div	3.3442	1.5745	2.1240	0.0362

Number of observations = 100; σ = 1.0007; Multiple R2 = 0.3286
F-statistic = 15.6647 (on 3 and 96 degrees of freedom), p-value = 0

Composite Vulnerability Index

The vulnerability index of a country is defined to be the predicted value of its output volatility according to the preferred Equation (1) given above. A way to interpret the vulnerability index is to think of it as that part of output volatility explained by *Vuln*, *Exdep* and *Div*, being the expected value of *Outvol* given the three covariates. Since it is expected that there are other factors not accounted for by the chosen variables that influence output volatility, then discrepancies between the index and the observed output volatility of a country can be expected.

To compute the index, observations on an individual country are inputted into the equation to give a predicted vulnerability score for that country. This can then be repeated for all countries for which appropriate observations are available – even those that have previously been excluded from the econometric analysis because of apparent extreme behaviour. To illustrate the procedure, the vulnerability scores for Algeria (a large state) and Antigua and Barbuda (a small state) will be:

Preferred model *Outvol* = 1.4142 + 0.0096 *Vuln.D* + 0.0322 *Exdep* + 3.3442 *Div*

Algeria 1.4142 + 0.0322 (*Exdep*) + 3.3442 (*Div*)

= 1.4142 + 0.0322 (25.40) + 3.3442 (0.887)

= 5.198

Antigua and Barbuda 1.4142 + 0.0096 (*Vuln*) + 0.0322 (Exdep) + 3.3442 (*Div*)

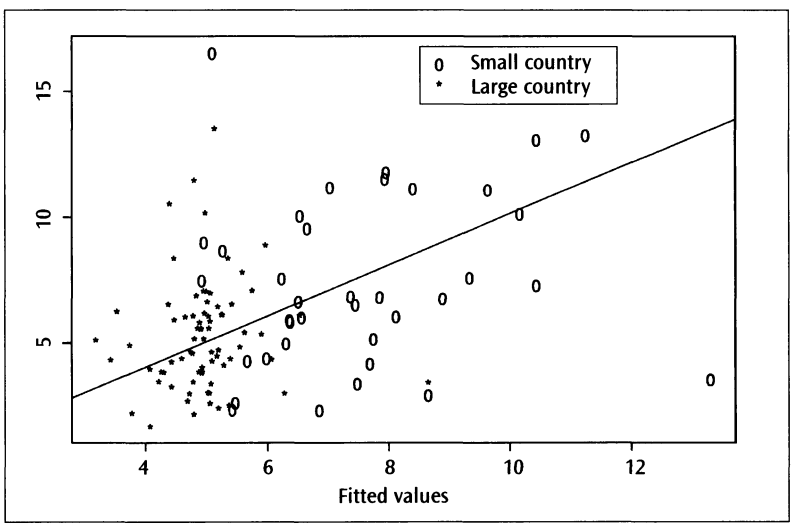
= 1.4142 + 0.0096 (430.77) + 0.0322 (90.50) + 3.3442 (0.832)

= 11.246

where the figures in parenthesis are the observations recorded on that variable for the country in question. This procedure is followed for 111 countries.

Figure 1 comprises a scatter plot of the predicted values of output volatility for each country against their observed values of output volatility. The straight line represents the *least squares fit* of predicted versus observed values of output volatility based on the sample of countries used to obtain Equation (1). This line has an intercept which is statistically not significant and a highly statistically significant slope of 1.02. Ideally we would want to see all the points in the scatter diagram lying very close to the diagonal line – the 45° line – implying a zero intercept and slope of 1. However, in our case there is some dispersion and countries like Chad, Fiji, Iran, Myanmar, Rwanda, Singapore and Vanuatu seem to be particularly far from the line. Four of these – Chad, Iran, Myanmar and Rwanda – are the countries that present extreme values of output volatility and seem not to fit this population of developing countries quite so well as the other states. In addition, Singapore does not fit the sample, and Vanuatu

Figure 1. Plot of the Predicted Output Volatility against Observed Output Volatility for the Sample of 111 Countries



presents extreme values of *Vuln*. It should be recalled that the data corresponding to all these countries, with the exception of Fiji, are not used in the estimation of Equation (1).

Model diagnostics check: residual analysis

To assess the goodness of fit of the proposed model (Equation (1)) it is necessary to analyse the residuals. Figure 2 presents a plot of the sequence of the standardised regression residuals in ascending order according to population size. The most noteworthy feature of this plot is that Jamaica, a country with a population of over 2.4 million but declared small for the purposes of this analysis, shows a large residual. Other countries depicting large residuals are Cape Verde, Djibouti, Equatorial Guinea, Guyana, Namibia, Peru, and Trinidad and Tobago.

Figure 2. Sequence of Standard Residuals Ordered by Population Size

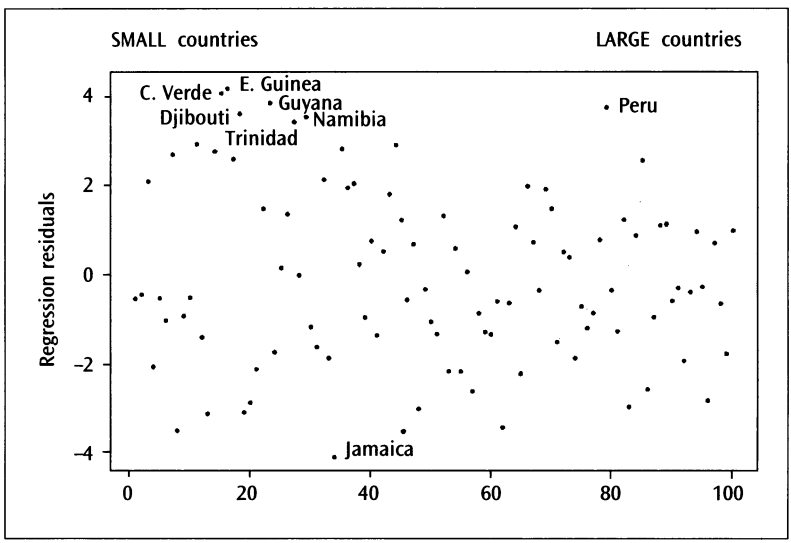


Figure 3 shows boxplots of the standardised regression residuals of small and large countries. These boxplots and the previous plot show that the regression residuals are approximately of the same magnitude for small and large countries. The boxplot of the residuals for small countries seems to be longer because of the influence of some extreme residuals.

Figure 4 shows a scatter plot of the fitted values versus the residuals. The straight line is the least squares line that fits the points. There is no outstanding pattern that can be recognised in this plot that would have pointed to lack of fit.

Figure 3. Boxplot of Standard Regression Residuals

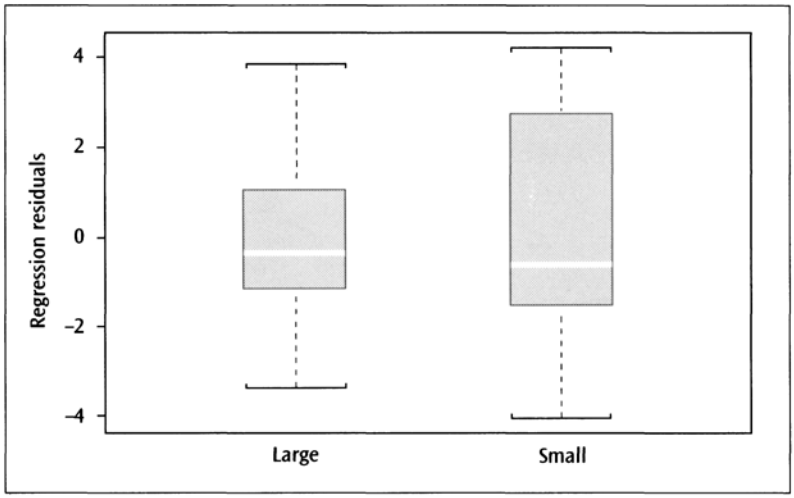


Figure 5 comprises a scatter plot of the predicted values of output volatility for each country against their observed values of output volatility for each of the 100 countries included in the sample used to estimate Equation (1). Again, it provides support for the estimated model.

Figure 4. Scatter Plot of Fitted Values and Residuals

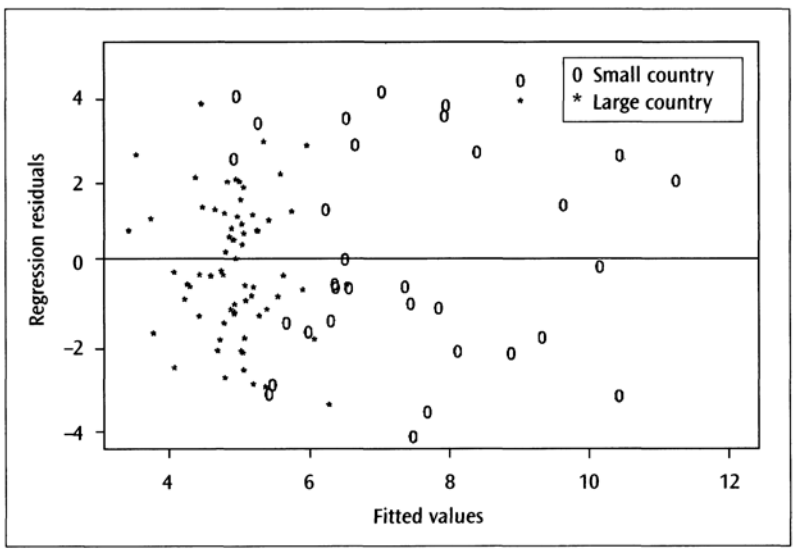
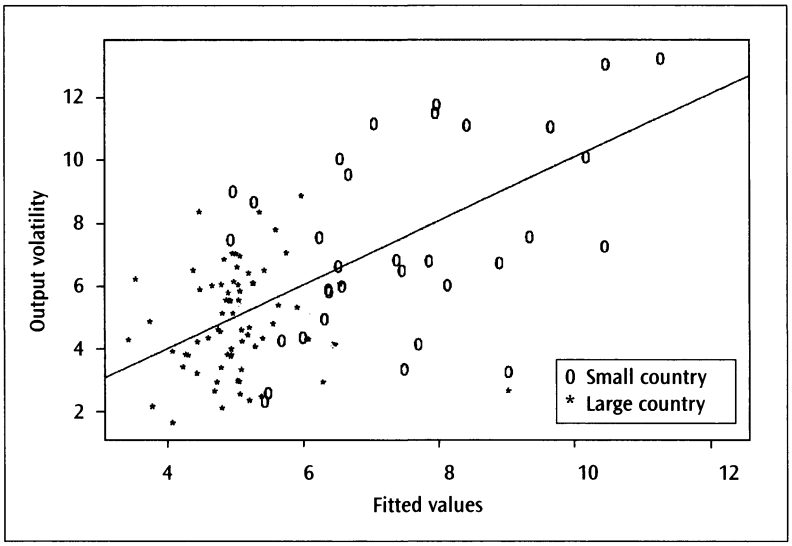


Figure 5. Plot of the Predicted Output Volatility against Observed Output Volatility for the Sample of 100 Countries



Annex 3

Table 6. Data on Factors Leading to Vulnerability and the Composite Vulnerability Index for 111 Developing Countries (*small states are shown in italics*)

	Population	Export Dependence	Vulnerability to Natural Disasters	UNCTAD Diversification Index	Composite Vulnerability Index	Rank
Algeria	26,722	25.40	6.34	0.887	5.198	53
Angola	10,276	56.25	41.68	0.914	6.282	31
Antigua and Barbuda	*65*	*90.50*	*430.77*	*0.832*	*11.246*	*2*
Argentina	33,780	7.40	60.34	0.564	3.539	109
Bahamas	*268*	*45.33*	*491.28*	*0.850*	*10.433*	*4*
Bahrain	*535*	*106.60*	*0.93*	*0.865*	*7.748*	*16*
Bangladesh	115,203	11.40	539.16	0.886	4.744	91
Barbados	*260*	*53.20*	*0.46*	*0.759*	*5.670*	*38*
Belize	*204*	*55.40*	*28.19*	*0.952*	*6.652*	*23*
Benin	5,086	24.00	99.41	0.859	5.060	63
Bhutan	1,596	35.00	4.11	0.852	5.390	45
Bolivia	7,063	19.00	92.17	0.797	4.691	93
Botswana	*1,401*	*60.00*	*418.03*	*0.837*	*10.158*	*5*
Brazil	156,486	9.00	63.01	0.517	3.433	110
Burkina Faso	9,772	12.50	147.66	0.929	4.923	77
Burundi	6,026	10.80	0.16	0.947	4.929	76
Cameroon	12,522	21.80	7.94	0.848	4.952	74
Cape Verde	*370*	*16.33*	*12.86*	*0.865*	*4.956*	*73*
Central African Rep.	3,156	16.00	1.22	0.859	4.802	85
Chad	6,010	16.33	241.6	0.951	5.120	56
Chile	13,822	29.40	24.76	0.794	5.016	68
China	1,196,360	22.20	223.52	0.483	3.744	108
Colombia	33,985	17.20	7.62	0.631	4.078	105
Comoros	*607*	*18.20*	*38.71*	*0.913*	*5.425*	*43*
Congo	2,443	49.60	5.62	0.882	5.961	35
Congo Dem. Rep.	41,231	27.00	4.66	0.868	5.186	54
Costa Rica	3,270	39.60	37.49	0.718	5.090	57
Côte d'Ivoire	13,316	36.80	0.2	0.905	5.626	39
Cyprus	*726*	*48.25*	*0.13*	*0.749*	*5.474*	*42*
Djibouti	*557*	*61.00*	*177.58*	*0.852*	*7.932*	*14*
Dominica	*71*	*50.33*	*261.97*	*0.769*	*8.122*	*12*

Table 6 (continued)

	Population	Export Dependence	Vulnerability to Natural Disasters	UNCTAD Diversification Index	Composite Vulnerability Index	Rank
Dominican Republic	7,543	24.60	79.83	0.793	4.858	83
Ecuador	10,980	29.00	31.66	0.808	5.050	64
Egypt	60,319	26.20	2.01	0.737	4.723	92
El Salvador	5,517	19.00	47.19	0.720	4.434	98
Equatorial Guinea	*379*	*40.75*	*118.98*	*0.945*	*7.029*	*21*
Ethiopia	51,859	10.00	199.6	0.912	4.786	88
Fiji	*758*	*56.00*	*296.28*	*0.845*	*8.888*	*8*
Gabon	*1,248*	*52.60*	*0.82*	*0.931*	*6.229*	*32*
Gambia	*1,042*	*55.75*	*339.16*	*0.857*	*9.331*	*7*
Ghana	16,446	20.40	138.46	0.889	5.044	65
Grenada	*92*	*44.00*	*228.26*	*0.845*	*7.848*	*15*
Guatemala	10,029	18.20	2.66	0.727	4.431	99
Guinea	6,306	22.40	1.22	0.941	5.282	48
Guyana	*816*	*85.75*	*85.17*	*0.885*	*7.953*	*13*
Haiti	6,893	8.50	114.35	0.833	4.474	96
Honduras	5,335	33.20	15.77	0.864	5.373	46
India	901,459	10.80	510.67	0.604	3.782	107
Indonesia	191,671	26.60	3.89	0.607	4.301	102
Iran	64,169	21.00	12.88	0.863	4.976	70
Jamaica	*2,411*	*61.20*	*130.86*	*0.850*	*7.484*	*18*
Jordan	4,936	52.60	1.9	0.788	5.743	37
Kenya	26,391	33.00	73.63	0.735	4.935	75
Kiribati	*78*	*13.00*	*0.90*	*0.969*	*5.082*	*59*
Lesotho	*1,943*	*15.40*	*86.89*	*0.969*	*5.985*	*34*
Libya	5,048	66.00	0	0.896	6.536	25
Madagascar	13,854	19.00	41.39	0.825	4.785	89
Malawi	10,520	24.20	192.82	0.899	5.200	52
Malaysia	19,247	85.40	0.94	0.520	5.903	36
Maldives	*236*	*127.50*	*9.79*	*0.909*	*8.654*	*9*
Mali	10,135	18.60	91.15	0.918	5.083	58
Malta	*361*	*92.80*	*0*	*0.734*	*6.857*	*22*
Mauritania	2,161	44.20	487.55	0.966	6.068	33
Mauritius	*1,091*	*60.40*	*29.29*	*0.858*	*6.510*	*27*
Mexico	90,027	15.40	5.54	0.384	3.194	111
Morocco	25,945	24.00	133.74	0.773	4.772	90
Mozambique	15,102	22.80	361.13	0.825	4.907	80

Table 6 (continued)

	Population	Export Dependence	Vulnerability to Natural Disasters	UNCTAD Diversification Index	Composite Vulnerability Index	Rank
Myanmar	44,596	1.80	15.63	0.873	4.392	100
Namibia	*1,461*	*55.00*	*56.56*	*0.837*	*6.527*	*26*
Nepal	20,812	18.80	74.23	0.943	5.173	55
Nicaragua	4,114	23.20	44.39	0.825	4.920	79
Niger	8,550	15.00	205.79	0.915	4.957	72
Nigeria	105,264	30.20	6.95	0.906	5.416	44
Oman	1,992	48.75	0.75	0.777	5.582	40
Pakistan	132,941	16.40	57.32	0.853	4.795	87
Panama	2,538	38.40	8.93	0.701	4.995	69
Papua New Guinea	*4,110*	*50.40*	*22.67*	*0.913*	*6.308*	*30*
Paraguay	4,701	32.80	18.55	0.860	5.346	47
Peru	22,886	10.80	93.17	0.807	4.461	97
Philippines	64,800	32.00	120.88	0.643	4.595	95
Rwanda	7,554	6.80	29.17	0.946	4.797	86
Samoa	*167*	*31.00*	*204.39*	*0.896*	*7.371*	*20*
São Tomé	*127*	*24.50*	*245.49*	*0.936*	*7.690*	*17*
Senegal	7,902	27.20	232.59	0.818	5.026	67
Seychelles	*72*	*61.00*	*0*	*0.896*	*6.375*	*28*
Sierra Leone	4,297	20.80	0.35	0.890	5.060	62
Singapore	2,821	173.75	0	0.491	8.651	10
Solomon Islands	*354*	*54.00*	*213.71*	*0.955*	*8.398*	*11*
South Africa	39,659	23.75	56.38	0.611	4.222	104
Sri Lanka	17,897	32.60	105.14	0.781	5.076	60
St. Kitts-Nevis	*42*	*59.00*	*21.43*	*0.850*	*6.362*	*29*
St. Lucia	*139*	*68.33*	*92.88*	*0.880*	*7.449*	*19*
St. Vincent	*11*	*47.75*	*74.8*	*0.865*	*6.563*	*24*
Sudan	26,641	5.00	184.22	0.921	4.655	94
Suriname	414	12.00	0	0.933	4.921	78
Swaziland	809	77.60	304.31	0.837	9.633	6
Syria	13,696	23.00	0.06	0.800	4.830	84
Tanzania	28,019	24.80	43.27	0.844	5.035	66
Thailand	57,585	37.40	51.73	0.492	4.264	103
Togo	3,885	28.60	22.4	0.871	5.248	51
Tonga	*93*	*27.00*	*532.13*	*0.911*	*10.439*	*3*
Trinidad and Tobago	*1,278*	*38.40*	*0.13*	*0.781*	*5.264*	*49*

Table 6 (continued)

	Population	Export Dependence	Vulnerability to Natural Disasters	UNCTAD Diversification Index	Composite Vulnerability Index	Rank
Tunisia	8,570	42.20	10.48	0.684	5.060	61
Turkey	59,597	16.60	3.95	0.636	4.076	106
Uganda	19,940	7.80	17.02	0.960	4.876	82
Uruguay	3,149	20.60	0.75	0.688	4.378	101
Vanuatu	*161*	*58.50*	*727.17*	*0.902*	*13.295*	*1*
Venezuela	20,913	28.00	1.09	0.769	4.887	81
Yemen	13,196	31.75	11.08	0.844	5.259	50
Zambia	8,936	31.60	67.03	0.932	5.549	41
Zimbabwe	10,739	34.80	188.18	0.728	4.969	71

Table 7. The Composite Vulnerability Index and Other Indices for 111 Developing Countries (*small states are shown in italics*)

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Algeria	26,722	5,570	90	2.32	108	5.198	53
Angola	10,276	674	9	2.91	100	6.282	31
Antigua and Barbuda	*65*	*5,369*	*86*	*13.38*	*3*	*11.246*	*2*
Argentina	33,780	8,350	98	6.19	40	3.539	109
Bahamas	*268*	*16,180*	*110*	*7.37*	*25*	*10.433*	*4*
Bahrain	*535*	*15,500*	*109*	*5.22*	*61*	*7.748*	*16*
Bangladesh	115,203	1,290	29	4.58	69	4.744	91
Barbados	*260*	*10,570*	*105*	*4.34*	*74*	*5.670*	*38*
Belize	*204*	*4,610*	*82*	*9.63*	*15*	*6.652*	*23*
Benin	5,086	1,650	37	5.81	53	5.060	63
Bhutan	1,596	790	16	4.3	76	5.390	45
Bolivia	7,063	2,510	54	2.61	103	4.691	93
Botswana	*1,401*	*5,220*	*85*	*10.21*	*12*	*10.158*	*5*
Brazil	156,486	5,500	88	4.25	78	3.433	110
Burkina Faso	9,772	780	15	3.73	89	4.923	77
Burundi	6,026	670	8	3.96	83	4.929	76
Cameroon	12,522	2,220	48	7.01	27	4.952	74
Cape Verde	*370*	*1,820*	*41*	*9.08*	*16*	*4.956*	*73*
Central African Rep.	3,156	1,050	23	5.1	62	4.802	85
Chad	6,010	690	10	13.49	2	5.120	56
Chile	13,822	8,900	102	6.58	36	5.016	68
China	1,196,360	2,330	51	4.84	66	3.744	108
Colombia	33,985	5,790	92	1.59	111	4.078	105
Comoros	*607*	*1,130*	*26*	*2.39*	*106*	*5.425*	*43*
Congo	2,443	2,750	57	8.84	17	5.961	35
Congo Dem. Rep.	41,231	300	1	6.39	39	5.186	54
Costa Rica	3,270	5,680	91	4.21	80	5.090	57
Cote d'Ivoire	13,316	1,620	36	5.36	59	5.626	39
Cyprus	*726*	*14,060*	*108*	*2.66*	*102*	*5.474*	*42*
Djibouti	*557*	*775*	*14*	*11.6*	*6*	*7.932*	*14*
Dominica	*71*	*3,810*	*76*	*6.12*	*41*	*8.122*	*12*
Dominican Republic	7,543	3,690	71	5.52	55	4.858	83
Ecuador	10,980	4,400	81	2.92	99	5.050	64

Table 7 (continued

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Egypt	60,319	3,800	75	2.9	101	4.723	92
El Salvador	5,517	2,360	52	4.18	81	4.434	98
Equatorial Guinea	*379*	*1,800*	*39*	*11.26*	*8*	*7.029*	*21*
Ethiopia	51,859	420	2	6.02	47	4.786	88
Fiji	*758*	*5,530*	*89*	*6.84*	*32*	*8.888*	*8*
Gabon	*1,248*	*3,861*	*77*	*7.64*	*23*	*6.229*	*32*
Gambia	*1,042*	*1,190*	*27*	*7.67*	*22*	*9.331*	*7*
Ghana	16,446	2,000	42	5.52	55	5.044	65
Grenada	*92*	*3,118*	*61*	*6.89*	*31*	*7.848*	*15*
Guatemala	10,029	3,400	68	3.18	96	4.431	99
Guinea	6,306	1,800	39	4.04	82	5.282	48
Guyana	*816*	*2,140*	*45*	*11.87*	*5*	*7.953*	*13*
Haiti	6,893	1,050	23	5.86	52	4.474	96
Honduras	5,335	2,100	43	2.43	105	5.373	46
India	901,459	1,240	28	2.12	109	3.782	107
Indonesia	191,671	3,270	64	3.76	88	4.301	102
Iran	64,169	5,380	87	10.11	14	4.976	70
Jamaica	*2,411*	*3,180*	*63*	*3.43*	*91*	*7.484*	*18*
Jordan	4,936	4,380	80	7.03	26	5.743	37
Kenya	26,391	1,400	31	3.77	87	4.935	75
Kiribati	*78*	*1,475*	*32*	*16.6*	*1*	*5.082*	*59*
Lesotho	*1,943*	*980*	*20*	*4.44*	*72*	*5.985*	*34*
Libya	5,048	6,125	94	6.05	46	6.536	25
Madagascar	13,854	700	11	3.37	93	4.785	89
Malawi	10,520	710	12	4.65	68	5.200	52
Malaysia	19,247	8,360	99	5.29	60	5.903	36
Maldives	*236*	*2,200*	*47*	*2.97*	*97*	*8.654*	*9*
Mali	10,135	530	3	4.57	70	5.083	58
Malta	*361*	*11,570*	*106*	*2.36*	*107*	*6.857*	*22*
Mauritania	2,161	1,610	35	4.27	77	6.068	33
Mauritius	*1,091*	*12,510*	*107*	*6.72*	*34*	*6.510*	*27*
Mexico	90,027	7,010	97	5.05	64	3.194	111
Morocco	25,945	3,270	64	4.52	71	4.772	90
Mozambique	15,102	640	6	5.5	58	4.907	80
Myanmar	44,596	650	7	10.48	11	4.392	100
Namibia	*1,461*	*3,710*	*72*	*10.13*	*13*	*6.527*	*26*
Nepal	20,812	1,000	21	4.41	73	5.173	55

Table 7 (continued

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Nicaragua	4,114	2,280	50	5.51	57	4.920	79
Niger	8,550	790	16	5.1	62	4.957	72
Nigeria	105,264	1,540	33	6.48	37	5.416	44
Oman	1,992	10,420	104	7.77	21	5.582	40
Pakistan	132,941	2,160	46	2.07	110	4.795	87
Panama	2,538	5,890	93	7	28	4.995	69
Papua New Guinea	*4,110*	*2,530*	*55*	*5.03*	*65*	*6.308*	*30*
Paraguay	4,701	3,340	67	8.32	19	5.346	47
Peru	22,886	3,320	66	8.32	19	4.461	97
Philippines	64,800	2,590	56	4.31	75	4.595	95
Rwanda	7,554	740	13	11.42	7	4.797	86
Samoa	*167*	*3,000*	*59*	*6.92*	*30*	*7.371*	*20*
São Tomé	*127*	*600*	*4*	*4.23*	*79*	*7.690*	*17*
Senegal	7,902	1,710	38	2.94	98	5.026	67
Seychelles	*72*	*4,960*	*84*	*5.9*	*51*	*6.375*	*28*
Sierra Leone	4,297	860	18	6.93	29	5.060	62
Singapore	2,821	19350	111	3.35	94	8.651	10
Solomon Islands	*354*	*2,266*	*49*	*11.21*	*9*	*8.398*	*11*
South Africa	39,659	3,127	62	3.38	92	4.222	104
Sri Lanka	17,897	3,030	60	3.3	95	5.076	60
St. Kitts-Nevis	*42*	*9,340*	*103*	*5.97*	*50*	*6.362*	*29*
St. Lucia	*139*	*3,795*	*74*	*6.59*	*35*	*7.449*	*19*
St. Vincent	*11*	*3,552*	*69*	*6.08*	*43*	*6.563*	*24*
Sudan	26,641	1,350	30	5.98	49	4.655	94
Suriname	*414*	*3,670*	*70*	*7.56*	*24*	*4.921*	*78*
Swaziland	*809*	*2,940*	*58*	*11.17*	*10*	*9.633*	*6*
Syria	13,696	4,196	78	6.83	33	4.830	84
Tanzania	28,019	630	5	6.01	48	5.035	66
Thailand	57,585	6,350	95	3.78	85	4.264	103
Togo	3,885	1,020	22	6.07	44	5.248	51
Tonga	*93*	*3,740*	*73*	*13.18*	*4*	*10.439*	*3*
Trinidad and Tobago	*1,278*	*8,670*	*101*	*8.75*	*18*	*5.264*	*49*
Tunisia	8,570	4,950	83	2.52	104	5.060	61
Turkey	59,597	4,210	79	3.88	84	4.076	106
Uganda	19,940	910	19	3.78	85	4.876	82

Table 7 (continued

	Population	Real per capita GDP	Rank	Output Volatility Index	Rank	Composite Vulnerability Index	Rank
Uruguay	3,149	6,550	96	6.48	37	4.378	101
Vanuatu	*161*	*2,500*	*53*	*3.61*	*90*	*13.295*	*1*
Venezuela	20,913	8,360	99	5.76	54	4.887	81
Yemen	13,196	1,600	34	6.07	44	5.259	50
Zambia	8,936	1,110	25	4.77	67	5.549	41
Zimbabwe	10,739	2,100	43	6.12	41	4.969	71

Small States, Small Problems? Income, Growth and Volatility in Small States[1]

William Easterly and Aart Kraay[2]

Summary: *Small states have attracted a large amount of research. In this paper we test whether small states are any different from other states in terms of their income, growth and volatility outcomes. We find that, controlling for location, small states have higher per capita GDP than other states. This income advantage is largely due to a productivity advantage, constituting evidence against the idea that small states suffer from an inability to exploit increasing returns to scale. Small states also do not have different per capita growth rates than other states. Small states do have greater volatility of annual growth rates, which is in part due to their greater volatility of terms-of-trade shocks. This terms-of-trade-based volatility is in turn due to small states' greater openness. However, their greater openness on balance has a positive net payoff for growth. The one differential policy measure that might be relevant for small states is to further open up to international capital markets in order to better diversify risk by further opening up to international capital markets, but the benefits even of that are still unresolved in the literature. We conclude that small states are no different from large states, and so should receive the same policy advice that large states receive.*

Smallness is neither a necessary nor sufficient condition for slow economic development. T.N. Srinivasan, 1986

Economic storm clouds are gathering over paradise and the outlook is undeniably gloomy. A.J. Dolman, 1985

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[2]The views expressed here are those of the authors and do not reflect the views of the World Bank, its Executive Directors or the countries they represent. The authors would like to thank two anonymous referees, Edgardo Favaro and seminar participants (especially our discussant Byron Blake) at the Joint Commonwealth Secretariat/World Bank Task Force conference held in St. Lucia for useful discussions.

Do small states suffer from their smallness? There are good theoretical reasons to believe that they do. The provision of public services may be subject to indivisibilities that lead to increasing returns to scale (Alesina and Spolaore, 1997), especially in the case of fiscal institutions (Easterly and Rebelo, 1993) and defence (Kuznets, 1960; Harden, 1985). Many theories of economic growth suggest increasing returns to scale in the private economy as well (Romer, 1986; Barro and Sala-I-Martin, 1995; Aghion and Howitt, 1998), which may be difficult to realise in small states. Small economies may also be at a disadvantage because their size prevents them from diversifying into a wide range of activities, making them more vulnerable to terms of trade shocks than large states (Commonwealth Secretariat, 1998; Briguglio, 1995; Armstrong and Read, 1998). Many small states suffer from poor location in that they are remote and/or landlocked, and many are located in regions prone to hurricanes and volcanic activity (Srinivasan, 1986). Public officials in small states may be much more likely to be subject to conflicting pressures (Farrugia, 1993), and it may be difficult to recruit a high-quality civil service given the limited pool of candidates in small states (Streeten, 1993). The trend towards trade multilateralism may put small states at a disadvantage because they presently benefit from many bilaterial trade concessions (Armstrong and Read, 1998).

These potential difficulties facing small states have not been lost on policymakers or academics. Numerous conferences and seminars on the special difficulties of small states have been convened over the past 40 years (Robinson, 1960; Benedict, 1967; Dobozi *et al.*, 1982; Commonwealth Consultative Group, 1985, 1997; Small States Financial Forum, 1987, 1988; Kaminarides *et al.*, 1989). International organisations such as the UN have commissioned studies on the problems confronting small states for many years (UN, 1971; Doumenge, 1983; UNCTAD, 1997), and the UN has formally recognised the special difficulties of small states in a resolution to that effect (Briguglio, 1995). Titles of papers on small states (see references) frequently feature ominous terms and phrases such as 'Problems', 'Vulnerability', 'Small is Dangerous' and even (twice) 'Paradise Lost'.

In this paper we look for empirical evidence of alleged disadvantages of size by examining small states with populations of one million or less. If small size is a disadvantage, then these states must suffer with a vengeance. In particular, we would expect that small states must on average be less developed and grow less rapidly than larger states. We test this hypothesis using a large cross-country dataset including many small states. In light of the grim predictions of theory, the picture of small states which emerges from this analysis is somewhat surprising. After controlling for a range of

factors, we find that small states have on average higher income and productivity levels than large states, and grow no more slowly than large states. Per capita GDP growth rates are more volatile in small states, due to their much greater exposure to international trade and fluctuations in their terms of trade. However, any growth disadvantages of this greater volatility are more than outweighed by the growth benefits of trade openness reaped by small states by virtue of their necessarily large trade volumes. Finally, small states are well-positioned to take advantage of opportunities for international risk sharing, since the correlation of economic fluctuations in small states with the world business cycle is surprisingly low.

These results contribute evidence in support of the growing view in the literature that small size might not be a disadvantage after all. Kuznets (1960) notes that small states also have advantages: primarily that many are lucky to have good natural resources and have small and more cohesive populations, factors which allow them to adapt better to change. Srinivasan (1986) and Streeten (1993) argue, without systematic empirical evidence, that small may also be beautiful. Using a sample of 48 countries, Millner and Westaway (1993) fail to find evidence that the effect of a number of growth determinants varies with country size. Armstrong *et al.* (1998) uses cross-sectional regressions covering a large number of small states and independent regions to argue that population size does not significantly affect growth, controlling for initial income and regional effects.

This paper proceeds as follows. In the next section we document that small states are richer and have higher productivity levels than large states. In the following section we observe that small states suffer no obvious growth rate disadvantage, and attribute this to a number of offsetting advantages and disadvantages of small states. We then document that although terms of trade volatility contributes significantly to the greater volatility of growth in small states, this is not the whole story – a significant small state effect on volatility remains after we control for terms-of-trade variability. In the next section we note that small states are relatively well-positioned to take advantage of opportunities to diversify away their special risks since currently they are not particularly financially open and the shocks they receive are relatively uncorrelated with those experienced by the rest of the world. The final section offers concluding remarks.

Small states and per capita income levels

In this paper we consider a large cross-section of 157 countries for which at least 10 years of annual data on per capita GDP adjusted for differences in purchasing power parity (PPP) are available. Of these, 33 are small

states defined as having an average population over the period 1960–95 of less than one million. These countries are listed in Table 1. They range in size from tiny St. Kitts-Nevis, with a population of 42,000, to Mauritius with a population of 916,000. The income range is similarly wide, from

Table 1. Small States

		Population (000)	Average per capita GDP 1985 PPP-adjusted $
ATG	Antigua and and Barbuda	63	5329
BHR	Bahrain	419	10,342
BHS	Bahamas, The	237	11,136
BLZ	Belize	178	3548
BMU	Bermuda	58	15,356
BRB	Barbados	247	5341
BWA	Botswana	880	1516
COM	Comoros	340	632
CPV	Cape Verde	295	746
CYP	Cyprus	638	5084
DJI	Djibouti	344	1479
FJI	Fiji	602	3149
GAB	Gabon	777	3853
GMB	Gambia, The	628	803
GNB	Guinea-Bissau	739	644
GRD	Grenada	92	2632
GUY	Guyana	719	1630
ISL	Iceland	223	9689
KNA	St. Kitts-Nevis	42	4399
LCA	St. Lucia	148	3264
LUX	Luxembourg	358	11,934
MDV	Maldives	201	1908
MLT	Malta	341	4049
MUS	Mauritius	916	4092
QAT	Qatar	384	18,278
REU	Réunion	496	2253
SLB	Solomon Islands	299	1845
SUR	Suriname	378	2877
SWZ	Swaziland	556	2358
SYC	Seychelles	59	2214
VCT	St. Vincent and the Grenadines	107	3312
VUT	Vanuatu	145	1633
WSM	Samoa	160	1844

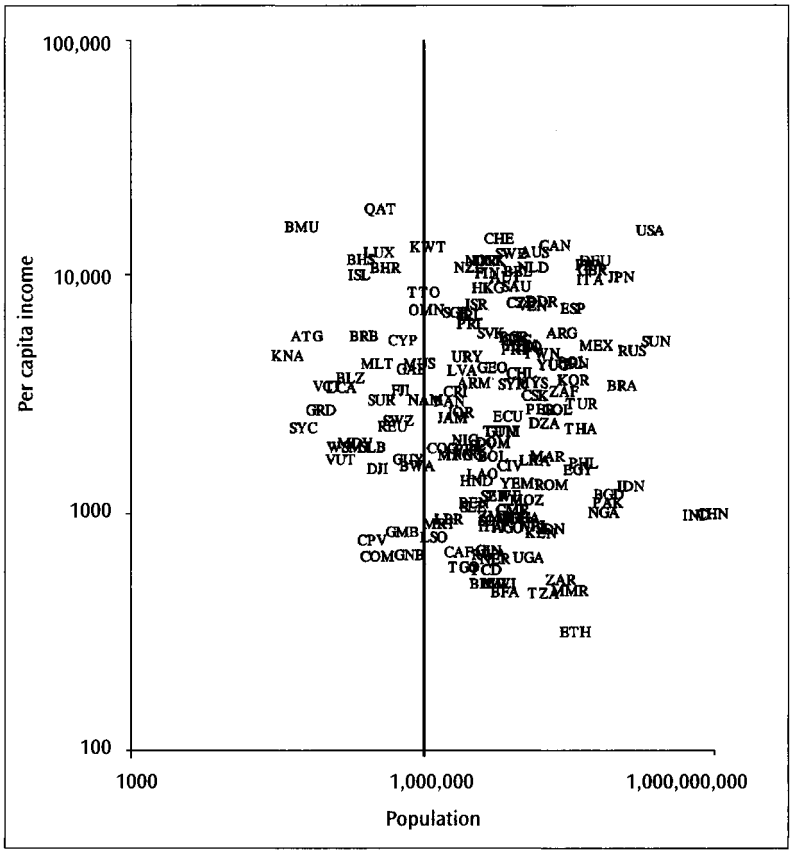
very poor African countries such as Guinea Bissau and Comoros, with real PPP-adjusted per capita GDPs of around $600, to wealthy oil-exporting countries such as Qatar, with a per capita GDP of over $18,000. Although our sample is quite large, it is worth noting that it is not comprehensive but rather is constrained by data availability. Of the 212 states and territories listed in the World Bank's databases, 55 have populations of less than one million, but we have only have internationally-comparable per capita GDP data for 33 of these small states. While it is not clear *a priori* what biases this might introduce (both rich small states such as Liechtenstein and poor small states such as Equatorial Guinea are excluded from our sample), we do note that some caution is in order before the results are generalised to all small states. In subsequent regressions the sample is even smaller, reflecting the non-availability of variables other than per capita incomes in these regressions. Details on variable definitions and data availability are provided in the Annex.

If small states suffer from the disadvantages of smallness, they should be poorer on average than larger states. What do we actually find? In Figure 1, we show that that without controlling for any other characteristic, small states have the same range of per capita incomes as the rest of the countries in the world. Moreover, if we control for the location by continent of all countries, whether they are oil producers, and whether they belong to the OECD, then small states are actually significantly richer than other states. We show this in the first column of Table 2, where we regress the logarithm of real per capita GDP at PPP on these dummy variables, as well as a dummy variable for small states. The significant coefficient on the small states dummy indicates that they are on average 50 per cent (=exp(.403)-1) richer than their regional neighbours. We note that this result does not reflect the obvious outliers in the sample, since the oil-exporting countries Qatar and Bahrain are picked up by the oil exporter dummy, and Luxembourg and Iceland are picked up by the OECD member dummy. Even if we exclude two other particularly wealthy small states not captured by these dummy variables (Bermuda and Bahamas), we still find that small states are nearly 40 per cent richer than other states. These results do not appear to be sensitive to the population threshold at which we divide countries into small and large states. Figure 2 plots the residuals from this regression (excluding the small states variable) by quintile of population, and we see the very strong income effect in the bottom two population quintiles.[1] We also note that the favourable performance of

[1]All of the results reported in the paper are qualitatively similar if we use the logarithm of population rather than an indicator variable for small states.

small states carries over to other quality of life indicators. For example, if we in turn use under-five infant mortality and life expectancy at birth as the dependent variable in the above regression, we find that infant mortality is significantly lower in small states by 22 per thousand, while life expectancy is about four years higher (columns 2 and 3 of Table 2).

Figure 1. Per Capita Income and Population Size, averages 1960–95



Although this analysis does not tell us why small states are so much richer than their regional neighbours and have better human development indicators, it does cast doubt on the often-heard arguments that small states suffer from a development *dis*advantage.

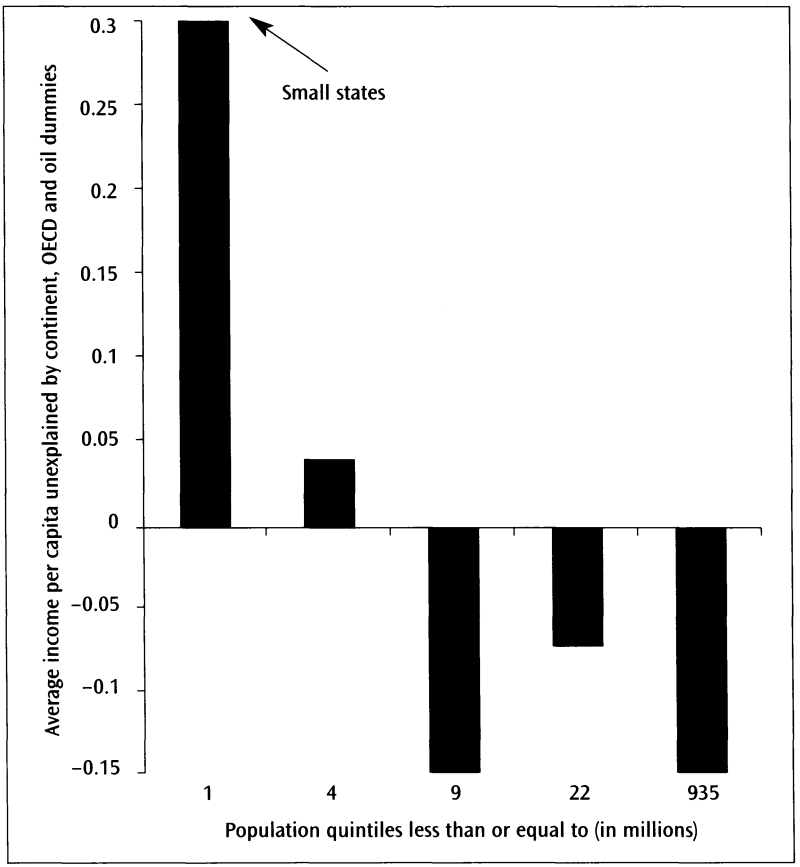
We next ask whether small states are richer than large states because they save more or because they have higher productivity levels. Following Mankiw, Romer and Weil (1992), we consider the prediction of the neo-

classical Solow growth model that the steady-state level of output per person is given by:

(1) $Y/L = A\,(s/(x+\delta+n))^{\alpha/(1-\alpha)}$

where Y/L is output per person, A is the level of labour-augmenting productivity, s is the investment to GDP ratio, x is the rate of labour-augmenting productivity growth, δ is depreciation, n is population

Figure 2. Unexplained Income Level and Population Size



growth, and α is the share of capital income in GDP. We assume a productivity growth of 2 per cent and a depreciation rate of 7 per cent. We take logs of both sides and regress the log of output per person on the same dummies as above (capturing continental and other productivity differences) and the log of the second multiplicative term in (1):

$$(2)\ \ln(Y/L) = \ln A + \alpha/(1-\alpha)[\ln s - \ln(x+\delta+n)]$$

We call this second term MRW, and report the results of this specification in the first column of Table 3. Comparing the coefficient on the small states dummy with that in the first column of Table 2, we find that small states' productivity advantage accounts for about two-thirds of their income per capita advantage (i.e. 0.267/0.403). This evidence is inconsistent with the commonly held idea that small states suffer from productivity disadvantages due to their inability to exploit increasing returns to scale. We also note that our specification differs from Mankiw, Romer and Weil (1992) in that we allow the average level of productivity to vary across regions, and these differences are statistically significant (remember that the regressions include a full set of regional dummies). Once we allow the productivity level to vary, the coefficient on MRW implies a capital share of .28 – which is in line with most estimates from national income accounting.

Table 2. Development Advantages of Small States

Dependent variable	Log real per capita GDP, average 1960–95	Under-five infant mortality per 1000 live births	Live expectancy at birth, years
OECD member	1.169	-28.415	7.736
	(0.148)	(5.723)	(1.018)
Oil exporter	0.815	0.896	0.893
	(0.178)	(12.488)	(1.513)
Small state	0.403	-22.887	4.143
	(0.108)	(9.548)	(1.383)
R-squared	0.709	0.634	0.719
Number of observations	157	152	153

Note: All regressions include a full set of regional dummies (sub-Saharan Africa, Asia, Europe and Central Asia, Middle East and North Africa and the Americas). Standard errors are White-corrected for heteroscedasticity.

It is interesting to decompose MRW into its numerator and denominator from equation (1). We do this in the second and third columns of Table 3, where we regress the log investment rate and the population growth rate on the same set of dummy variables as before. We find that small states have significantly higher investment rates but not significantly lower population growth rates. This suggests that some portion of the previously unexplained income differential between small states and large states can be explained by the former's higher investment rates.

We conclude with two important caveats regarding these results on the productivity and investment advantages of small states. First, the regressions in Table 3 do not control for differences across countries in human capital, since it is difficult to adequately measure saving in the form of human capital. As a result, the productivity advantage of small states to some extent reflects their human capital differences from the rest of the world. This is consistent with the strand of the literature that argues that small states need to rely on imported technology and high quality human capital to compensate for their lack of natural resources. Bhaduri *et al.* (1982) suggest human capital-intensive exported services as a way to escape 'smallness'; Briguglio (1995) suggests the importance of regional technical cooperation; Millner and Westaway (1993) find that small states have a weak disadvantage in agricultural technological catch-up but a weak advantage in non-agricultural technological catch-up; and Armstrong and Read (1998) suggest that advances in transport and communications technology have helped offset 'smallness' and 'remoteness'.

Table 3. Productivity Advantages of Small States

Dependent variable	Log real per capita GDP, average 1960–95	Log investment as a share of GDP	Average annual population growth 1960–95
OECD member	1.122	0.199	–0.411
	(0.114)	(0.098)	(0.129)
Oil exporter	0.692	0.138	0.166
	(0.151)	(0.160)	(0.092)
Small state	0.267	0.381	–0.241
	(0.132)	(0.107)	(0.146)
MRW	0.389		
	(0.102)		
R-squared	0.761	0.440	0.701
Number of observations	139	139	139

Note: All regressions include a full set of regional dummies (sub-Saharan Africa, Asia, Europe and Central Asia, Middle East and North Africa and the Americas). Standard errors are White-corrected for heteroscedasticity.

Second, we should take with more than a grain of salt the result that investment accounts for some of the income advantage of small states. The significance of the MRW term in Table 3 may reflect reverse causality – richer states can afford to invest more and are usually thought to

choose lower population growth than poor states. Or it may reflect an omitted third factor, like incentive policies that affect both investment and income. It is difficult to adequately control for these possibilities. Instead, we simply note that they are likely to result in an overstatement of the contribution of investment to the income advantage of small states.

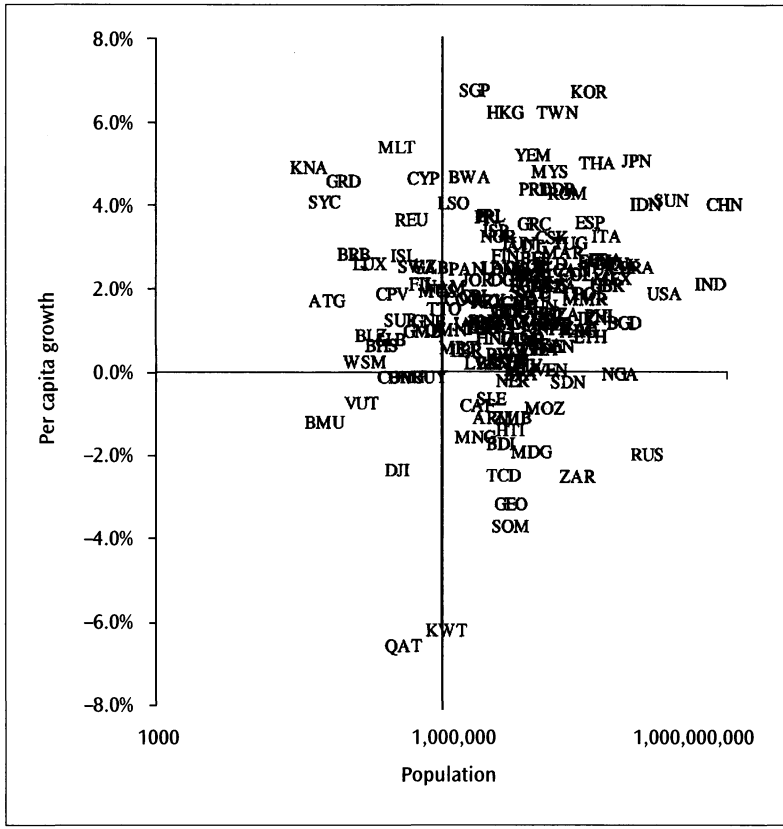
Micro states and macro growth

Even if small states do not have a disadvantage in terms of their income levels, they might grow more slowly over time for various reasons. Several endogenous growth theories predict that growth rates will be positively correlated with size due to scale effects. As we discuss below, small states exhibit greater output volatility, which has been shown empirically to have adverse effects on growth (Ramey and Ramey, 1995). What do the data say? In Figure 3 we show that small states have the same range of growth experiences as other states, suggesting that there is no obvious scale effect for growth rates that is related to population size. There is also no growth difference for small states after controlling for continental location, oil, and OECD dummies, as shown in the first column of Table 4 where we regress growth on these dummies and the small states dummy.

Why do small states not suffer any apparent growth disadvantages due to their small size? To answer this question, we consider a parsimonious cross-country growth regression which captures two of the factors prominent in the small states debate: openness to international trade (measured as the share of imports and exports in GDP), and volatility (measured as the standard deviation of annual growth rates within each country). We also include initial income to capture convergence effects, and secondary school enrolment rates. The results are shown in the second column of Table 4. All of the variables are significant of the expected sign. The negative coefficient on initial income shows that there is conditional convergence, secondary enrolment rates and trade openness are positively correlated with growth, and growth rate volatility has a negative effect on growth.

This regression framework provides some useful clues as to why the small state dummy is not significant in the basic regression in the first column of Table 4. In particular, we can see from this regression that small states will have several offsetting advantages and disadvantages. We have already seen that they are richer than other countries (relative to regional averages) and hence will have slower growth than average by the conditional convergence effect. They have slightly higher secondary enrolment rates, which would give them higher growth. Most important, as we document below, small states tend to have much higher trade shares

Figure 3. Average Per Capita Growth and Population Size 1960–95



(which is good for growth), offset by much higher volatility of growth rates (which is bad for growth).[1] As a result, the insignificance of the small state dummy in the growth regression suggests that the negative effects of high initial income and high volatility are roughly offset by the positive effects of trade openness and better educational attainment.

In order to document the magnitude of these offsetting effects, we first need to know how different small states are from non-small states in terms of their growth determinants. We document the well-known fact that small states typically have much higher trade ratios than larger states in the first column of Table 5, where we regress this variable on the same set

[1]The model of Alesina and Spolaore (1997) mentioned earlier has the prediction that openness reduces the costs of forming small states, since countries will not need to produce domestically the entire basket of goods they wish to consume.

of dummy variables as before, as well as the small states dummy. The consequences for openness of being a small state are truly remarkable. Small states have a ratio of trade to GDP that is 54 percentage points (1.2 standard deviations) higher than the average economy controlling for continent dummies. Second, real per capita GDP growth rates tend to be much more volatile in small states. The second column of Table 5 shows that the standard deviation of annual real per capita GDP growth is 1.4 percentage points higher in small states than in non-small states.[1] Finally, for completeness, we show that while secondary school enrolment rates are modestly higher in small states, this difference is only marginally statistically significant.

Table 4. Growth in Small States

Dependent variable	Average annual real per capita GDP growth, 1960–95	Average annual real per capita GDP growth, 1960–95
OECD member	0.007	0.009
	(0.004)	(0.006)
Oil exporter	–0.014	–0.0004
	(0.007)	(0.005)
Small state	0.002	
	(0.005)	
Log of real per capita GDP in first available year		–0.017
		(0.004)
Average secondary school enrolment rate, 1960–95		0.0003
		(0.0001)
Average share of trade in GDP, 1960–95		0.012
		(0.003)
Standard deviation of annual GDP growth, 1960–95		–0.179
		(0.082)
R-squared	0.195	0.535
Number of observations	154	130

These results suggest that the absence of a clear growth advantage of small states is due to three main offsetting effects: (i) they are significantly richer, and hence grow more slowly due to the conditional convergence effect; (ii) they are significantly more open to international trade, which is good for growth, and (iii) they suffer from significantly greater growth rate

[1]An interesting historical footnote is that the greater volatility of small states has not always been accepted. Tarshis (1960) finds little evidence of a relationship between the coefficient of variation of per capita income and size across US states, and poses this as a puzzle.

Table 5. Growth Advantages and Disadvantages of Small States

Dependent variable	Share of trade in GDP, average 1960–95	Standard deviation of annual GDP growth, 1960–95	Secondary school enrolment rate average 1960–95, per cent
OECD member	–0.179	–0.026	27.705
	(0.078)	(0.004)	(5.844)
Oil exporter	0.145	0.016	6.587
	(0.095)	(0.005)	(5.821)
Small state	0.539	0.014	8.344
	(0.071)	(0.003)	(4.440)
R-squared	0.286	0.468	0.717
Number of observations	158	154	136

Note: All regressions include a full set of regional dummies (sub-Saharan Africa, Asia, Europe and Central Asia, Middle East and North Africa and the Americas). Standard errors are White-corrected for heteroscedasticity.

volatility, which is bad for growth. Interestingly, the positive growth effect of openness in Table 5 ($0.012 \times 0.54 = 0.65$ per cent) is 2.5 times larger than the negative growth effect ($-1.79 \times 0.014 = -0.25$ per cent) of small states' greater output volatility. This suggests that even if output volatility is one of the consequences of openness (as we discuss in more detail below), small states' greater openness is still on balance a positive factor for small states' growth. This finding is of particular interest, given the widely held view that small states suffer from their openness.[1] Of course, any source of growth volatility that is not related to openness might still be detrimental to small states' growth performance.

Finally, it is interesting to note that one often-heard advantage of small states does not appear to be empirically very important. It is often argued that one of the advantages enjoyed by small states is that they tend to be ethnically very homogeneous, which may make it easier for such states to forge the political consensus required to adjust to a changing environment (for example, Kuznets, 1960). Easterly and Levine (1997) and Alesina, Baqir and Easterly (1999) find that measures of ethnic fractionalisation are associated with a lower level of public goods provision and

[1]This view of small states dates back at least to Scitovsky (1960). Dolman (1985) goes so far as to suggest that many small island states would be better off reverting to autarkic subsistence economies.

lower growth. However, the mean value of an ethno-linguistic indicator of diversity among those small states for which data are available is insignificantly different from that among non-small states, suggesting that the benefits of homogeneity may not be especially pronounced for small states.[1]

Openness and volatility

In the previous section we saw that small states reap growth benefits from their openness to international trade, but suffer growth costs due to the greater volatility of their growth rates. In this section we consider in more detail the relationship between trade openness and volatility in small states. A significant portion of the growth rate volatility experienced by small states can be attributed to volatility in their terms of trade, but this is not the entire story. Even after controlling for terms of trade volatility, growth rates in small states are significantly more volatile than in non-small states.

We first document that the volatility of terms-of-trade shocks experienced by small states is much greater than for larger states. We define terms-of-trade shocks as the growth in the local currency price of exports times the share of exports in GDP, less the growth in the local currency price of imports less the share of imports in GDP, which captures both the magnitude of price fluctuations (changes in export and import prices) and their importance for the domestic economy (weighted by the shares of exports and imports in GDP). We then regress the standard deviation of this measure of terms-of-trade shocks on the same set of regional dummies as before, dummy variables to capture oil exporters and commodity exporters who are more likely to suffer extreme fluctuations in their terms of trade, and the small state dummy. The results are shown in the first column of Table 6. We find that there is a highly significant small state effect, with the standard deviation of terms-of-trade shocks larger by 0.013 (or about one-third of one standard deviation of the dependent variable) in small states.

This terms-of-trade volatility might be due to two factors. First, we have already seen that the share of trade in GDP is especially large in small

[1]One characteristic of small states that we do not examine is geographical isolation. It is difficult to test the effect of this, because some of the literature indicates that being geographically isolated because you are landlocked is harmful to growth, while other strands of the literature stress 'islandness'. Since virtually all small states are either islands or landlocked, it would be hard to separate out the effects of geographical isolation, however measured.

states, and this may contribute to the magnitude of our measure of terms-of-trade shocks (since it weights changes in import and export prices by the shares of imports and exports in GDP). Second, small states' exports are likely to be more specialised than those of large states, both in terms of products exported and in terms of export markets (Kuznets, 1960; Armstrong and Read, 1998). As a result, the average prices of their exports and imports might be more volatile than in countries with more diversified trade patterns. The distinction between these two factors is important because there is little that small states can do about their overall trade volumes – autarky is simply not an option for small states that produce a much narrower range of goods and services than they consume, and moreover we have already documented the substantial growth benefits accruing to small states due to their openness. If, in contrast, the greater volatility of growth is due to excessive reliance on a few export products and a few export markets, then policies designed to help diversify exports may help to dampen economic fluctuations.[1]

We can get a rough idea of the relative importance of these two factors by redefining the terms-of-trade shock as the unweighted difference between the growth in export prices and the growth in import prices. When we use this alternative measure of terms-of-trade shocks as the dependent variable in the second column of Table 6, we find that the small states dummy is negative and insignificant. That is, the volatility of changes in the price of exports relative to imports is, if anything, lower in small states relative to larger states. Although this is not conclusive evidence, it does cast doubt on the notion that small states are especially vulnerable to external shocks simply because their international trade is more specialised. Rather, the greater volatility of terms of trade shocks in small states is primarily due to their unavoidably large trade shares.

Finally, it is worth noting that greater volatility of growth in small states is not solely due to their greater susceptibility to terms-of-trade shocks. To illustrate this point, we re-estimate the growth rate volatility regression in the second column of Table 4, adding the volatility of the terms of trade as an explanatory variable. The results are shown in the last column of Table 6. We find that the small state dummy remains significant even after controlling for the effect of greater terms-of-trade volatility on the volatility of overall growth. This indicates that a significant portion of the volatility of output in small states is unrelated to their exposure to international trade. This additional volatility may be due to several factors.

[1]Of course, to the extent that scale economies are important at the industry level, the potential for such diversification might be limited in small states.

Table 6. Volatility in Small States

Dependent variable	Standard deviation of annual terms of trade growth, 1960–95	Standard deviation of unweighted annual terms of trade growth, 1960–95	Standard deviation of annual per capita real GDP growth, 1960–95
Commodity exporter	0.007	0.023	0.007
	(0.005)	(0.013)	(0.004)
Oil exporter	0.023	0.074	0.012
	(0.005)	(0.024)	(0.006)
Small state	0.013	-0.011	0.021
	(0.005)	(0.011)	(0.005)
Terms of trade volatility			0.250
			(0.105)
R-squared	0.490	0.474	0.535
Number of observations	114	114	114

Many of the small states in our sample are located in areas prone to natural disasters such as hurricanes, and the higher growth volatility in small states may simply reflect the devastating effect of these natural forces. However, it is also possible that some of this observed volatility reflects difficulties in measuring per capita incomes, which may be particularly acute in small states where statistical institutions may be weaker than average.

Opportunities for diversification

In the previous section we have seen that small states experience much more volatile growth rates than non-small states. This in part reflects their greater vulnerability to terms-of-trade shocks, and perhaps also the tendency of many small states to suffer heavily from natural disasters. In this section we briefly consider the potential of small states to mitigate the adverse effects of this largely-unavoidable volatility by sharing risks with the rest of the world.

One of the potential benefits of financial openness is that it allows countries to share risks with the rest of the world, by holding claims on assets located outside their borders whose returns are not perfectly correlated with returns to domestic assets. The magnitude of these benefits depends on how volatile are shocks to the domestic economy, and the extent to which they are uncorrelated with shocks abroad. Small states are particularly well-situated to benefit from such risk-sharing arrangements, for

two reasons. First, small states suffer large shocks, as documented in above. Second, in contrast to the often-heard view that small states are particularly susceptible to cyclical fluctuations abroad, we find that the shocks experienced by small states are not unusually correlated with the world business cycle. We illustrate this point in the first column of Table 7, where we regresses the correlation of per capita GDP growth in a country with OECD average real per capita GDP growth on the same set of dummies as before, as well as the logarithm of average per capita GDP (to capture the stylised fact documented by Kraay and Ventura (1998) that business cycles in poorer countries tend to be less correlated with the world average cycle), and a small state dummy. The small state dummy is insignificant, suggesting that small states are in fact not unusually correlated with the OECD cycle. However, it is important to note that growth rates in neighbouring small states may be highly correlated, especially to the extent that their growth rate volatility reflects natural disasters such as hurricanes. This suggests that regional arrangements to share risk among small states will be much less valuable than pooling risks with a wider range of countries.

Despite the potential benefits of risk sharing through participation in international financial markets, small states do not appear to be especially open financially. We illustrate this point in the last two columns of Table 7, where we regress two alternative measures of financial openess on a set of regional dummies as well as the logarithm of average per capita income. The first is the fraction of years for which data are available in which the IMF reports restrictions on capital account transactions in that country.[1] The coefficient on the small state dummy is positive, although insignificantly so. This suggests that small states are not particularly open to financial flows, as measured by legal impediments to such flows. Combining this observation with the empirical results of Lewis (1995), who finds that consumption risks are less diversified in countries with this measure of capital controls, this suggests that small states are not taking full advantage of the opportunities for risk diversification afforded by international capital markets. The second outcome measure of financial openness (capital inflows plus capital outflows as a share of GDP) paints a somewhat more favourable picture, as the small state dummy is positive and statistically significant at conventional levels. This suggests that the volume of capital flows is slightly larger for small states than for non-small

[1]As reported in the International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions. The disadvantages of this measure are well-known. First, it captures only the presence, and not the intensity, of controls. Second, it captures only controls on residents, and not on non-residents, although there is some presumption that these two types of controls are correlated across countries.

Table 7. Risk Sharing in Small States

Dependent variable	Correlation of real per capita GDP growth with OECD average real per capita GDP growth, 1960–95	Fraction of years over 1960–95 during which capital controls were in place	Average capital inflows plus capital outflows as a fraction of GDP, 1960–95
OECD member	0.082	–0.149	0.016
	(0.069)	(0.100)	(0.029)
Oil exporter	–0.077	–0.097	–0.027
	(0.065)	(0.116)	(0.016)
Small state	0.013	–0.026	0.027
	(0.054)	(0.080)	(0.013)
Log real GDP per capita, average 1960–95	0.119	–0.170	0.024
	(0.029)	(0.050)	(0.013)
Commodity exporter	0.026	0.005	–0.014
	(0.058)	(0.063)	(0.011)
R-squared	0.345	0.278	0.260
Number of observations	155	139	132

states, although the magnitude of this effect is small – only about 2–3 percentage points of GDP. Overall, this evidence suggests that small states are not as financially open as they might be given the high volatility they face, and hence are not fully exploiting opportunities for international risk diversification.

We conclude this section with the observation that although greater financial openness may help small states insure against the large shocks they receive, financial openness is itself no panacea. Grilli and Milesi-Ferretti (1995) and Rodrik (1998) both note that there is no evidence that financially-open economies grow faster or enjoy higher investment rates. On the other hand, there is also no systematic evidence in favour of the popular view that by opening up financially, countries expose themselves to greater volatility due to the vagaries of international financial markets (Kraay, 1998). In summary, although financial openness may provide a valuable means for small states to diversify some of the large risks they face, existing evidence does not support the view that there will be a large growth payoff from such policies.

Conclusions

Our analysis suggests that small states have perhaps received excessive attention from the literature as special cases calling for special policy measures. We find that small states have, if anything, significantly higher per capita income than others in their region. There is no significant difference in growth performance between large and small states. It is true that growth volatility and volatility of terms-of-trade shocks as a percentage of GDP is higher in small states, but this is largely due to their greater trade openness – and the net benefits of openness on growth are positive. The one missing piece in the current situation of small states is that they are not fully exploiting the potential to diversify their risks by opening up to international capital movements. But even the payoff to filling in this last missing piece is unclear from evidence in the literature.

This is not to say that small states are free of economic problems. Many small states are still poor, and promoting growth as a means to alleviate poverty is as important in small poor states as it is in other poor countries. The good news is that the lessons of growth experience from all countries seem to be applicable to small states, so they can benefit from the large amount of cross-country evidence on the determinants of long-run growth.

Annex. Variable Definitions and Data Sources

This annex documents the definitions of all variables and the data sources from which they were constructed. Variables are listed in the order in which they appear in the tables in the table below. The sample consists of all countries for which at least ten years of data on real per capita GDP adjusted for purchasing power parity is available, as documented below. Since a number of very small states do not report national accounts data and/or are not included in the United Nations/World Bank Income Comparison Project, real per capita GDP data are not available for these states. As discussed in the text, it is not clear *a priori* what sorts of biases this might introduce. Nevertheless, some caution is in order before extending the results to the universe of small states.

All of the cross-sectional regressions are based on averages over all available years of the relevant variables. As a result, the time period covered for each country varies with the length of the time series available for that country. Due to unavailability of additional explanatory variables, the sample of countries covered in the regressions varies, ranging from the maximum possible of 157 to a minimum of 114.

Table 8. Variable Definitions and Data Sources

Variable Name	Comments	Source
Small State	Indicator variable for average population over all available years 1960–95 less than 1 million	World Bank World Tables
OECD Member	Indicator variable for 24 members of OECD before recent expansions	
Oil Exporter	Fuel (SITC3) exports account for more than 50% of total exports	World Bank World Development Report 1996
Real GDP per capita	Primary source is the Summers and Heston Penn World Table, Version 5.6, measured in 1985 international dollars. Missing observations in the PWT are filled in where possible using PPP-adjusted GDP estimates reported by the World Bank	Summers and Heston, World Bank World Tables
Infant Mortality	Infant mortality per thousand live births	World Bank World Tables
Life Expectancy	Life expectancy at birth, measured in years	World Bank World Tables

Table 8 (continued)

Variable Name	Comments	Source
Investment/GDP	Ratio of investment to GDP adjusted for purchasing power parity. Available only for countries appearing in Summers and Heston since World Bank does not report PPP GDP by expenditure components	Summers and Heston
Initial Real per capita GDP	Real per capita GDP in the first available year for that country	Summers and Heston, World Bank World Tables
Secondary School Enrolment Rates	Gross secondary school enrolment rates, per cent	World Bank World Tables
Share of trade in GDP	Exports plus imports as a share of GDP, both measured in constant-price local currency units	World Bank World Tables
Terms of Trade Growth	Growth rate of local currency export deflator multiplied by share of exports in GDP, less growth rate of local currency import deflator multiplied by share of imports in GDP	World Bank World Tables
Unweighted Terms of Trade Growth	Growth rate of local currency export deflator less growth rate of local currency import deflator	World Bank World Tables
OECD Average Growth	Population-weighted average of real per capita GDP growth rates of 24 OECD member countries before recent expansions	Summers and Heston, World Bank World Tables
Capital Controls	Average over all available years of indicator variable for presence of restrictions on capital account transactions	International Monetary Fund Annual Report on Exchange Arrangements and Exchange Controls
Capital Inflows and Outflows as Share of GDP	Sum of credit items plus –1 times debit items in the financial account of the balance of payments, expressed as a share of GDP in current dollars at market exchange rates	International Monetary Fund Balance of Payments Statistics Yearbook Revision 5

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Comments on 'Small States: A Composite Vulnerability Index' and 'Small States, Small Problems?'

Byron Blake

The juxtaposition of the two studies 'Small States, Small Problems?' and 'Small States: A Composite Vulnerability Index' and the presentations by Dr. William Easterly and by Dr. Christopher Easter are instructive. The studies address an issue of great salience to a very significant number of countries in the international community. I welcome the opportunity to intervene as a discussant.

The two studies conclude firmly that small states:

- are very vulnerable in the sense of high output volatility which derives significantly from
  - economic openness or high dependence on international trade and the volatility of commodity terms of trade
  - vulnerability to natural disasters;
- under normal conditions have growth rates which are not dissimilar to those of large states;
- experience volatility the fundamental causes of which are outside their control.

The study on the Composite Vulnerability Index (CVI) is particularly instructive. An analysis of 111 countries, including 37 small economies of which two-thirds were small island states, shows that 34 small states were among the 50 most vulnerable countries. In fact, of the 30 most vulnerable states on the CVI, 28, or 93 per cent, were small states and only three small states were among the 61 least vulnerable states.

A preponderance of small states, vulnerable to factors outside their control and hence not subject to national policies, constitutes a major challenge to international policy-makers. This also raises a question mark over the efficacy of the emphasis placed in recent years by international financial institutions (IFIs) and bilateral donors on national policies and the macroeconomic framework of small states as the primary cure for their economic difficulties. Sound national policies and engagement in the international economy are necessary, but definitely not sufficient,

conditions for the sustained development of small states, especially small island states.

In the face of the factual evidence, Dr. Easterly and Dr. Kraay conclude firmly from their econometric analyses – what they put in and omit to put into the black box – that: 'small states are no different from large states, and should receive the same policy advice' and, we presume, treatment in terms of access to market and to financial (capital) resources. They even go so far as to entitle their study 'Small States: Small Problems?'. The implied message to international policy-makers is clear.

The logic of their conclusion is, however, difficult to fathom. It invites a closer analysis of their arguments. The authors accept that growth volatility and volatility to terms of trade shocks are higher for small states. They even overstate the cause as 'due *entirely* to their greater trade openness' (my emphasis). They then proceed, on the basis of the argument, to state that 'the net benefits of openness on growth are positive' and to argue not only for greater trade openness, but to recommend that small states 'diversify their risks by opening up to international capital movements'. Put differently, small states are being urged to put in place more of the openness which heightens their vulnerability and the volatility of their growth.

The authors fail to assess either the extent (size) of the net positive benefits or its underpinnings. They also fail to analyse the factors which have underpinned the robustness of the historical growth in small states. It might be instructive, however, to note that the authors posit that 'the negative effects of high initial income and high volatility *are roughly offset* by the positive effects of trade openness and better education attainment' (my emphasis). What would be the net effect of a greater negative effect from even higher initial income and greater volatility and a lower positive effect from trade openness? *There is a point at which the net result can turn negative.*

An analysis of the underpinnings of the growth performance of the small states in the 1960s to the 1990s. and particularly up to the mid-1980s, would have been instructive. In that period of good growth and income performance of small states, the international community expressly accepted that small states were different and treated them differently. Special and differential treatment was reflected in, for example:

- access to concessional or grant financing for capital and infrastructural development. These 'soft' resources not only financed the building of infrastructure but facilitated much of the re-building of capacity after natural disasters;

- preferential access to export markets. This permitted the beneficial effects of higher and assured export earnings to be combined with more competitive import sourcing. Built-in market assurance mechanisms, such as the longstanding national quota systems in Europe for bananas and the European Union licensing system and hurricane licences after 1993, mitigated the impact of natural disasters and assured re-entry to the market when production was restored;
- stability of export earnings (many of the small states, as ACP members in association with Europe under the Lomé Convention, had much of their export earning fluctuation stabilised through STABEX and SYSMIN);
- importance of natural resources to the expansion of global production and trade gave some small economies particular importance for a period. Petroleum-based energy, bauxite and strategic location in a Cold War context significantly influenced the growth performance of small economies such as Bahrain, Trinidad and Tobago, Jamaica, Singapore, the Bahamas, Malta, Mauritius and Gabon.

The current global approach and the policy which would be reinforced and encouraged by Dr. Easterly's firm conclusion would remove all these advantages which underpin the performance on which the analyses leading to the policy decisions are based.

The GATT Uruguay Round of negotiations, for example, has significantly undermined the provisions for special and differential treatment for small states in relation to trade, including non-reciprocal preferential arrangements. Simultaneously, resource constraints as a result of the policies of major donor countries and new demands from large states have significantly reduced the availability of financial resources available to small states, even to deal with difficulties arising from global threats such as climate change and the resultant more destructive and frequent natural disasters, drug trafficking and money laundering.

Technological developments, especially in respect of new materials and re-cycling, are reducing significantly the importance of many raw materials. These developments, combined with the end of the Cold War, are also reducing the locational advantage of some small states.

The above factors suggest that an effort to project the growth and income prospects might have yielded very different results.

No Nobel Prizes are in fact likely to be awarded for predicting the outcome.

The firmness of Dr. Easterly's conclusion is astonishing for another reason.

The study admits in several places to results which are not easily explained. Consider the following examples:

- 'We are not sure why microstates are so much richer than their regional neighbours . . . but we see this as a decisive refutation of the macro arguments that microstates suffer from a development disadvantage';
- '. . . we should take with more than a grain of salt the result that investment accounts for even as much as one-third of the income advantage of small states . . . It may reflect an omitted third factor . . .'

  This third factor is not identified. There is no discussion as to whether such a factor could be negatively influenced by new policies and so undermine performance in the future.
- 'We find that there is a highly significant microstate effect, with the standard deviation of terms of trade shock larger by 0.013 . . . in microstates.'
- 'It is also possible that some of this observed volatility reflects difficulties in measuring per capita incomes . . . particularly acute in small states . . .'
- The authors did not consider whether the statistical measurement difficulties have similar distorting effects on the growth of per capita incomes on which their conclusions so much depend.

In looking closer at the issue of statistics, it is clear that the authors interpreted the numbers very conveniently. It is well known that the larger the number, the smaller the impact of any change, and conversely for small numbers. A country which produces one motor car will increase its motor car output by 100 per cent when in the next year it produces two motor cars. Conversely, a country which produces 100 motor cars will only have increased its output by 1 per cent when it produces 101 cars.

Are small states different? As you ponder the question, reflect on the impact of Hurricane Andrew on the USA and that of Hurricane Gilbert on Jamaica. I left Miami just before the airport was closed for Washington, DC where Hurricane Andrew was not even an item of news. Conversely, I had to wait for almost a week after Hurricane Gilbert had struck to get one of the first international flights into any part of Jamaica. Reflect, also, on the often publicised statistics on the higher transportation costs and higher per capita cost of infrastructure for small stages. The counter-intuitive nature of the finding of the Easterly and Kraay Study should have forced the authors to be more sceptical.

I note the disclaimer in the study that the views expressed are not neces-

sarily those of the World Bank. I hope the word 'necessarily' was an error. Alas, however, the similar disclaimer in 'Bananarama' did not prevent that equally weak study being quoted by the World Bank and other officials.

In conclusion I wish to draw attention to the fact that while Easterly and Kraay entitle their study 'Small States: Small Problems?', the 1994 UN Conference on Small Island Developing States had as its title 'Small States: Big Problems'. Those words are still on the walls of the Sherbourne Conference Centre in Barbados.

Management of Economic Risks in Small States

Managing Catastrophic Disaster Risks using Alternative Risk Financing and Pooled Insurance Structures[1]

John D. Pollner *et al.*

Abstract: *For developing economies subject to natural disasters, and to meet the long-term sustainable growth objectives of small economies, this report addresses the available mechanisms for using and improving the insurance market to handle disaster risks.*

The report critically examines the current financial and insurance institutions in both emerging and developed economies, and concludes that with key institutional changes, catastrophe losses can be better absorbed by markets, with resulting financial benefits to local industries, domestic insurance companies, households, international reinsurers and governments, through the use of more optimally structured risk-sharing arrangements. This approach is consistent with global trends in reducing the role of the state, which is traditionally a significant sector in small countries and hence more vulnerable.

The conclusion, based on the evidence, is that market arrangements (both domestic and international) can better channel and fund these risks, with governments and multilateral institutions supporting the development of self-sustaining structures. Market mechanisms for disaster funding do not always develop on their own precisely because they have, historically, interfaced among local institutions and the gargantuan international markets, hence the role of multilateral development institutions as international facilitators for improving the functioning of risk transfer mechanisms.

The analysis contained in this report, using conservative financial assumptions, shows that the structured finance approach is quite feasible with some initial funding leverage to build up the necessary reserve base for ensuring self-sustainability.

[1]This paper is a revised version of a paper presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference in London in February 2000.

Introduction

Caribbean nations, on the whole, are exposed to high levels of risk from natural disasters, primarily hurricane and windstorm risks, but also significant concentrations of earthquake, volcano and flood risks.

As part of a historical strategy to address the financial and economic impact of such risks, many Caribbean islands have successfully leveraged international insurance capital and have been able to transfer much of the risk, particularly for commercial but also for residential properties, on to the international insurance and reinsurance markets. The same has not been the case, however, for public sector assets and infrastructure, many of which remain heavily exposed, implying large potential fiscal liabilities if natural catastrophes were to disable such assets.

Recent experience in the catastrophe insurance markets

Despite the good use of the international catastrophe reinsurance market as reflected in the well-developed, albeit thinly capitalised, domestic insurance industries in the Caribbean (prompting needed regulatory reforms to achieve higher capital and solvency standards), international market volatility in the last decade has also been a cause of concern regarding the sustainable availability of insurance capital to cover future disaster events in exposed countries.

Global catastrophes, such as past hurricanes or earthquakes around the world, generated significant reinsurance shortages in the early to mid-1990s resulting in dramatic rate increases in the Caribbean. During the mid-1990s, Caribbean countries experienced insurance rate increases between 200–300 per cent on account of shortages of insurance cover due to indemnity payments made for large hurricane and earthquake losses world-wide. From a developmental perspective, this experience of market shocks discouraged prudent 'risk hedging' policies in the form of promoting widerspread insurance practices both in the public and private sectors of the Caribbean. To illustrate, the average variation on typical catastrophe insurance rates in the Caribbean and internationally, within the past decade, fluctuated between 30 per cent and 50 per cent.

While the latter 1990s experienced welcome decreases in rates after new global insurance companies entered the market and investment bankers began offering securitised insurance instruments for sale in the capital market, the end of volatility, particularly for small countries with a high dependence on foreign coverage, is not necessarily a given. Some worrying signs are the fact that 1998 and 1999 were the years with the highest levels of catastrophe losses from windstorms and earthquakes combined

since 1992, the year Hurricane Andrew struck Florida and the Caribbean, and 1994, the year of the Northridge earthquake.

Perhaps due to the overly high dependence on the international insurance industry, the local industry of the Caribbean has not accumulated capital of its own to better 'buffer' international rate movements and achieve a more optimal mix of risk-bearing capital, leveraging both domestic and international funds. The domestic insurance industries are generally highly fragmented which accentuates the relatively low levels of available risk capital in a significant portion of the industry. New regulations being developed will raise the bar in terms of minimum capital and underwriting solvency requirements, but additional efforts are needed to ensure that entry into the industry brings additional capacity to better absorb risks.

Another area for development is the adoption of mitigation-based pricing incentives since the lack of sufficient risk differentiation for pricing purposes tends to penalise those who have already undertaken productive vulnerability reduction measures. Welcome signs in the regulatory sphere include the tax deductibility of catastrophe insurance reserves in some countries, which help meet the objective of increasing risk bearing capacity.

International experience with alternative risk transfer mechanisms

International experiences using alternative catastrophe risk management arrangements have shown that in both public sector sponsored schemes (for example, hurricane risk in Hawaii and Florida) or private sector initiatives (investment bank sales of catastrophe insurance-linked securities to the global capital markets), innovations have allowed better tailoring of risk-bearing capacities and financial terms to those most needing protection, i.e. the insureds as well as the smaller primary insurance companies who are on the front line in identifying and channelling risks to the market. The global capital markets, comprising nearly 50 times the capital of the world insurance markets,[1] are well suited to absorb some of the risks and financial payouts generated by catastrophic events.

Various financial market mechanisms have evolved for this purpose, of which 'catastrophe bonds' are a prime example of securitising insurance risks. Such bonds, which are issued publicly to investors, generally pay interest much above the market rates in order to compensate for the risk

[1] *Source:* Goldman Sachs; US Insurance Services Office, FIBV International Federation of Stock Exchanges, Guy Carpenter/Marsh McLennan.

of interest or principal defaults by the borrower, in the event of a major catastrophe. However, since the borrower's intermediary can invest the funds in risk free securities (to be used only on a 'catastrophe day'), the net cost to the borrower is reduced substantially and approaches that of traditional reinsurance.

In addition, recent innovations such as basing 'disaster payouts' on objective hazard intensity measurements (for example, wind speed or earthquake intensity) provide more confidence to investors that underlying damage assessments cannot be manipulated by the borrower/insured, and permit accessibility and transparency in the risk assessment process. Given that such bonds are linked to events unrelated to the traditional financial markets, they also serve as a portfolio diversification hedge for investors. The actuarial probability of default of such bonds is generally lower than similarly rated investment securities already actively traded in the capital markets.

Governments, particularly in the developed economies in Europe and the USA, have already witnessed the 'exit' of insurers from private markets prone to natural catastrophes and have therefore established public/private collaborative schemes to insure catastrophic cover through risk pooling (and removal of catastrophe risks from company balance sheets), coupled with group reinsurance arrangements and last resort credit back-up. Capital markets have been willing to provide credit support for insurance purposes since projections of future premiums and other charges can suffice to secure such debt and its repayment, if used. Thus, capital markets have been able to increase insurance capacity, particularly at the upper loss layers which could strain the balance sheets of insurers and reinsurers alike. For smaller vulnerable economies, such support might be catalyzed by multilateral institutions not only to assure coverage capacity, but also to help stabilise the premiums paid through long term funding arrangements.

To a large extent, however, developing countries facing high risks of natural catastrophe exposure have not had the market access or the industry collaboration required to tap into the latest financial structures and instruments which could optimise their risk coverage and premium terms, taking into account the priority to reduce insurance market volatility and permit sustainable and affordable financial protection. Multilateral institutions can help support the development of broader risk pooling schemes with supporting credit enhancements, to provide actuarially cost-effective arrangements to manage catastrophic risks, while promoting efficient markets.

Addressing the catastrophe insurance problem: policy and institutional responses for sustainable risk management practices in disaster-prone countries

This report demonstrates that in natural disaster-prone small economies, difficulties in properly funding potential catastrophic risks become magnified when compared to the insurance risk challenges already present in international markets. Emerging economies suffer not only from the devastating effects of disasters, but also from market imperfections and constraints which generate disincentives to better risk management. In the Caribbean region, the problem of catastrophe risk insurance and constraints to expanding risk management strategies are linked both to the limited domestic risk-bearing capacity and the dynamics of international market forces.

The domestic capacity constraints are manifested in: (a) high exposures to perils such a hurricanes; (b) limited fiscal capacities to fund major disaster reconstruction for low-income communities and public properties; (c) insufficient vulnerability reduction measures taken for properties and physical assets; (d) limited reserves of domestic insurance capital; and (e) resulting under-insurance in the economy. Closely linked, the characteristics of the international insurance markets have also impacted on the development of local risk management practices through: (a) past premium rate volatility which has limited insurance coverage to only middle/higher income sectors; (b) lengthy past delays in rate adjustments and capacity replenishments following global disaster events; (c) high levels of reinsurance provided to local insurers with accompanying commissions remitted which tend to increase incentives for maintaining high premiums; and (d) proportionately higher insurance costs for catastrophic-level risks given insurers' needs to retain high and costly levels of capital to fund such eventualities.

Solutions to the catastrophe risk problem, due to its potentially devastating effects, cannot be accomplished without leveraging sufficient capital and assuring stable long term capacity, two important financial pre-conditions. At the individual country level, governments can instill risk management practices by better controlling 'exposure' through regulatory actions aimed at vulnerability reduction programmes particularly for the low income sectors,

ensuring that the local insurance sector has sufficient capital (net of reinsurance cover) to withstand large losses. Simultaneously, enforcement of insurance coverage, both in the private and public sectors is needed, along with market incentives to monitor property risks and adjust premiums by rewarding owners and property holders who reduce physical risk exposures.

While such actions can provide the framework for establishing the requisite institutional support, the magnitude of catastrophe risks requires more radical solutions to ensure that governments can minimise contingent fiscal liabilities, and that the private sector and local communities can recover quickly from natural disasters. To address the catastrophe risk insurance constraints listed above, stable insurance funding mechanisms are required with the ability to accumulate reserves which can be more optimally leveraged via risk transfer to the international markets. In the context of small economies with limited risk absorption capacity, the pooling of risk exposures enables broader coverage protection using more efficient deployment of pooled capital for risk transfer, permitting a faster accumulation of catastrophe reserves to help buffer the disruptive supply effects of world-wide disasters on domestic markets.

The resulting efficiencies, including sub-regional diversification and exploiting the latest risk transfer technologies, can be implemented with special credit enhancement instruments to provide backstop liquidity. Such arrangements can be brokered by multilateral development institutions which can assist in arranging the requisite inter-country and market collaboration, while setting the basis for *ex-ante* regulatory requirements to ensure financial solvency and risk reduction. The combination of public, private, international and multilateral resources can jointly implement broader cost-effective risk management tools which will begin to minimise, in a more timely manner, the economic and financial disruptions of future disaster events.

The structure of the Caribbean insurance markets

The specific characteristics of existing insurance markets need to be taken into account before considering the structure of pooled or alternative risk financing approaches. In the Caribbean region, the traditional insurance structure involves the proportional treaty contracted with reinsurers, whereby some 70 per cent of written risks are 'ceded' to reinsurers

who take on that proportion of risks as well as the corresponding premium income. For local insurers, however, the transfer of premium income collected is rewarded with commissions paid back by the reinsurers for bringing in and administering the client business. Local insurers also traditionally reinsure another 20 per cent of their retained risk under 'catastrophe excess of loss' (XL) treaties.[1] These are differentiated from proportional or quota share treaties in that they pay no commissions and the premium rate is based on a quantification of a specified limit on payable losses. XL reinsurance thus requires a more meticulous assessment of risks, exposure and actuarial probabilities. Netting the XL reinsurance cover, Caribbean companies tend to retain a net risk equalling about 20–24 per cent of the total originally insured amounts.

Examining the above arrangements, the analysis shows that increased welfare in terms of reducing individual country risk can be obtained through pooling such financial risks across different risk zones in the Caribbean. As with portfolio diversification, a larger risk pool not only lowers the minimum net risk capital requirement (and thus increases the surplus capital available), but also allows for more efficient reinsurance arrangements which can be contracted on a larger value base. The analysis of insured loss potentials is a multidisciplinary effort which takes into account physical weather/geological phenomena, engineering structural analysis and financial loss estimation. Generally, the estimated expected loss (EPL) is a function of all three, i.e. (a) the probability distribution of hazard events of varying intensities; (b) the structural vulnerability parameters of buildings or physical assets subject to such hazards; and (c) the value of such assets and their associated expected losses in currency terms, when subjected to hazard events and associated structural damage.

However, in the catastrophe insurance industry, given the limited actuarial base (since catastrophe events are defined as extremely infrequent yet severe), the pricing of risk includes an uncertainty factor or 'risk load' which reflects prudent financial management. This means, however, that reinsurance pricing for the upper (least probable) loss levels does not decline in proportion with the scale of loss probability. Thus, the use of

[1]An excess of loss (XL) reinsurance contract claim is invoked when damages exceed a specified amount (the 'attachment point' of the contract). Any losses below the attachment point are 'retained' and paid by the primary insurer. The XL contract, however, only covers losses up to a pre-specified limit (the 'exhaustion point'). Any losses above and beyond that point have to be covered either by the primary insurer or via a different reinsurance contract. In this regard, XL contracts frequently appear as specified 'layers' of coverage within a range of possible loss amounts. In contrast, proportional (quota share) treaties share losses between primary insurer and reinsurer in specified percentages (for example 30 per cent and 70 per cent respectively).

capital market instruments such as contingent credit lines can provide certain efficiencies in pricing, since their contractual terms are more binary, that is, during 'no event' periods the price is a minimum commitment charge, but after an event the full principal and interest is repayable. Such pricing efficiencies can be tested both through theoretical financial models, such as perpetual annuity present value comparisons, or through time simulations spanning the likely probability periods for major catastrophes.

Catastrophe risk pooling and risk financing instruments

The World Bank has in the past been involved in the use of contractual, credit and political risk guarantees as part of its available financial instruments to support development. The area of catastrophe insurance is relatively new in this context, and therefore an applicable instrumentation to be considered for specified applications is examined in this report to support ongoing needs in this recurrent area. The analysis presented demonstrates the feasibility and potential, and the effectiveness, of using Bank instruments to support initiatives which may facilitate corrections in existing market imperfections so as to allow the eventual development of new markets in risk management to serve the needs of emerging economies. Commercial products for the same purpose are also examined – while these are feasible in the medium term, at the outset some additional prudential longer-term protection would be required to avoid potential insolvency of pooled schemes if catastrophes occurred in early years.

The report takes a step-by-step approach to show how both 'risk pooling' structures, as well as alternative catastrophe coverage mechanisms in the form of long maturity risk financing facilities and capital market instruments, can achieve more optimal risk protection and financing terms to allow expansion of insured coverage of public sector assets and private properties. Besides testing the straightforward financial engineering aspects of pools supported by credit type instruments, the analysis also examines the effect on domestic and international insurance markets, to ensure that any proposed scheme does not unduly interfere with, or replace, existing market arrangements. By examining the insurable assets (private and public) in eight countries in the easternmost part of the Caribbean, and quantifying the portion of the premium and risk used to fund catastrophe losses, the report shows that, through pooling and use of credit type instruments for catastrophe coverage, governments and uninsured property owners or enterprises (with insurable assets) can expect improved terms of coverage. This can provide greater incentives across countries to promote and implement insurance as a prudent risk management practice in highly exposed areas.

The transfer of a share of catastrophic risks to a pool need not, however, imply loss of income to domestic/local insurers. In fact, such a transfer would reduce domestic insurers' largest risks on their retained portfolios which could then be expanded to increase coverage for more traditional non-catastrophic risks. The reduction in the retention of catastrophe risks would also mean that domestic insurers may need less reinsurance protection which would allow them to retain additional gross premium income. While this would appear to reduce the market share of the reinsurers, a pooled scheme would actually have the opposite effect once the coverage capacity was increased to include public sector and other uninsured assets. Since even a regional pooled structure could not fully fund a major catastrophic event, the pool itself would need to reinsure much of its portfolio before it could rely on a backstop credit line at the topmost loss layer. When analysing the income implications for reinsurers, such a pool, with expanded coverage capacity for the assets mentioned, would allow reinsurers to provide additional coverage under more cost-effective arrangements for them and for the pool itself, which can be shown to produce net surplus income under the proposed financial structures.

For countries concerned about 'subsidising' their neighbours under a pooled scheme, this would be prevented by differentiating the price of premiums paid into the pool based on the country and structural risks insured. Concerns of high-risk countries using up the pool's initially retained capital before the reinsurance layer can be accessed ('attached'), can be alleviated through financial design options. One such option would permit access to the reinsurance layer in proportion to such countries' risk in the capital (retained) layer. In this manner, any one large disaster would not use up the capital base of the collective pool, although such advantages might be somewhat offset by the higher cost implied by 'custom designing' the reinsurance policy for each country.

The use of catastrophe bonds as a top reinsurance layer for a pool is also examined and considered financially feasible, albeit slightly more expensive yet still affordable, compared to backstop credit at favourable terms. The latter permits an accumulation of substantial savings on premium, thus allowing full funding of the eventual debt service to be paid in the event of a natural catastrophe.

Laying the foundation with regulatory and structural measures

It should be emphasised that, while financial mechanisms may achieve much to optimise the management of large periodic risks affecting the region, regulatory as well as structural measures to lower physical vulner-

ability also need to be given high priority since such measures can sharply reduce risk exposure in permanent ways. Using the existing engineering expertise and knowledge of Caribbean structural building standards, the analysis goes on to show that with relatively modest investments in vulnerability reduction measures, either at the construction stage or retrofitting (the former being more cost-effective), the reduction in risk exposure could potentially be as large as 50 per cent.

The risk management options examined can lead to real benefits to all participants (clients and sellers) in the insurance markets. However, some minimum preconditions such as: (i) a sound and strong insurance regulatory framework; (ii) enforcement of prudent risk management practices; (iii) objective and verifiable criteria for measuring and recording losses; and (iv) implementation and enforcement of protective structural measures and construction codes are essential for assuring the integrity of any participatory insurance scheme.

The pooling of catastrophe risks also encourages the process of standardisation of risk rating and risk assessments which in turn supports the regulatory role of the insurance supervisor. This also helps to counteract the observable fragmentation and varied risk underwriting practices in the domestic insurance sectors, and permits an orderly build up of the necessary catastrophe reserves, backed up by more stable multi-year reinsurance and catastrophe financing mechanisms.

Setting a new paradigm for disaster funding from the development community

Looking forward, the issue of catastrophe risk management goes beyond the critical needs of particular countries and the functioning of insurance markets, and impacts directly on the existing paradigm of international development assistance. To date, development institutions, both multilateral and bilateral, have focused on *ex-post* disaster assistance and relief and in essence served as reinsurers of last resort for countries impacted by natural disasters that do not currently employ policies for comprehensive risk management. The mere existence and availability of such external assistance can generate the same moral hazards that prudent insurance practices attempt to prevent, abdicating the critical practices of ensuring physical protection of assets or not insuring those assets with *de facto* exposures to natural events.

Nevertheless, the development community has made some progress in the last decade in moving from *ex-post* disaster reconstruction assistance to a new stage of *ex-ante* funding for investment in mitigation, as an

explicit policy tool for sustainable development. However, to complete the requirements of a national risk management approach, we are now entering a third phase involving the application of risk transfer mechanisms which address the large residual risk of latent exposures to large catastrophic events which require funding means beyond what can be controlled solely through mitigation and physical measures. These residual stochastic risks can be better addressed via the insurance and risk transfer mechanisms which provide the basis for financial protection and instilling strong incentives for vulnerability reduction, both of which can substantially reduce the magnitude of potential economic stresses following disasters.

Structure of the report

In tackling the challenge of risk management in disaster-prone countries, this report examines the existing constraints and opportunities for implementing a catastrophe insurance system which can resolve the key obstacles currently impeding broader implementation of a risk funding approach. The four main pillars in such a strategy involve: (i) strengthening the insurance sector regulatory requirements and supervision; (ii) establishment of broad based pooled catastrophe funding structures with efficient risk transfer tools; (iii) promoting public insurance policies linked to programmes for loss reduction in the uninsured sectors; and (iv) strengthening the risk assessment and enforcement of structural measures such as zoning and building code compliance.

For this purpose, this paper first examines the characteristics of the global insurance and reinsurance market and its links with Caribbean insurers and policyholders, in order to illustrate the local repercussions of world catastrophe events and their impacts on local industry performance. It then provides an examination of the domestic Caribbean insurance market structure and institutions, and their commercial practices in providing protection to different sectors, showing that the current industry structure may in some cases reduce incentives for improving risk underwriting practices and promoting loss reduction.

The third section discusses how structural mitigation and vulnerability reduction measures can prove to be cost-effective investments that can dramatically reduce exposure risks on properties. Such measures, which can substantially reduce damages through *ex-ante* action, can have the effect of lowering property risk premiums through reductions in expected losses. Also examined is an approach for implementing a public insurance scheme for low-income communities in order to promote risk reduction and explicit insurance coverage. The paper then analyses the modalities

of risk transfer for potential financial losses. This includes the specific structure of reinsurance contracts in the Caribbean and the current sharing between domestic risk retention and international risk transfer. The latter demonstrates how the structure of insurance contracts is highly dependent on international capital and its pricing, but allows limited risk underwriting and pricing decision-making at the domestic level.

The paper goes on to demonstrate what innovations are being developed for catastrophe risk management, ranging from private securitisation of insurance risks to public/private partnerships to increase insurance capacity in constrained markets. It also demonstrates that the availability of alternative risk financing instruments can be exploited to supplement traditional reinsurance and achieve cost-effective means of obtaining coverage and capacity for different levels of catastrophic loss. The paper then examines the options and choices of risk management tools for the ESC[1] and demonstrates that the structuring of inter-country insurance pooling arrangements yields lower aggregate expected losses and improves the leverage provided by risk capital based on the actuarially based exposures to loss of the individual countries. Such pooled arrangements can provide more coverage capacity and use reinsurance and risk-financing resources more effectively due to the resultant economies of scale, as well as the improved capacity to accumulate and retain capital reserves.

The paper concludes by demonstrating the financial feasibility and sustainability of operating and managing catastrophe risks under a sub-regional pool. Using historically-based and simulated projections of losses from natural disasters, a catastrophe pool's risk transfer needs can be optimised both with reinsurance as well as alternative risk transfer mechanisms. These can help resolve the issues of adequate coverage and stable funding sources while providing financial incentives and increased underwriting capacity to both domestic insurers and international reinsurers. By-products of this process include the consolidation and monitoring of regulatory solvency for catastrophic risk reserves, and policy leverage to implement loss reduction incentives. The complement of these risk sharing arrangements and risk transfer instruments is tested from a financial feasibility viewpoint to ensure actuarial solvency of a pool. The resulting structure is also shown to allow for increased market participation at both the national and international levels.

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[1]This paper uses the abbreviation 'ESC' to mean 'East Caribbean'. The term is used differently from 'EC' or 'Eastern Caribbean' which is commonly used to refer to the OECS countries or countries in the ECCB Area. As this paper covers the OECS countries, as well as Barbados and Trinidad and Tobago, when referring to all these countries as a sub-regional group the term 'ESC' has been adopted.

The catastrophe insurance and reinsurance markets

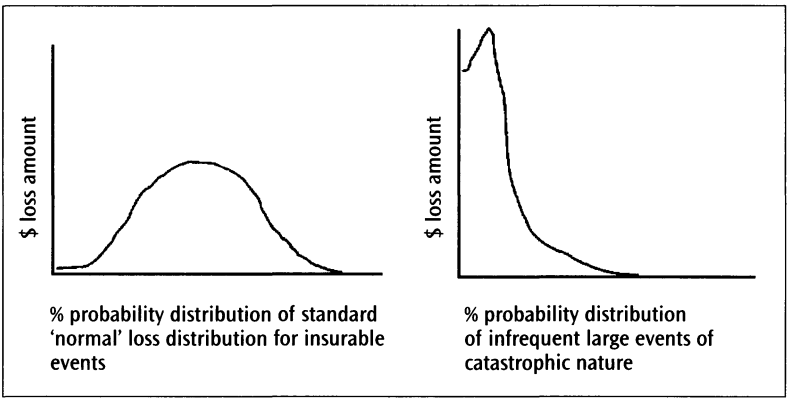
This section of the paper addresses the financial vulnerability of the international reinsurance markets to major global catastrophic events, and the subsequent supply-linked price impacts on the primary insurance industry in the Caribbean. The implication of this analysis is that governments and local insurance industries require financial strategies to better handle potential future fluctuations in these markets in order to maintain sustainable insurance coverage against catastrophic events. For this purpose, protection mechanisms beyond the individual enterprise or specific insurance contract level (topics addressed in subsequent sections) can prove to be more beneficial for cushioning global market effects and better leveraging the limited domestic funding base against catastrophic risks. The analysis shows that the increasing risk exposures at the global level, as well as the recurrent risks in the Caribbean, are likely to perpetuate the volatile insurance cycle. The world capital and credit markets may serve as alternative sources of insurance capital, and given their magnitude compared to world insurance markets such alternatives (discussed further below) should be considered as available policy tools for countries to improve their effectiveness and efficiency in disaster risk management.

Catastrophe risk poses a unique challenge to the insurance industry, both globally and in the Caribbean. Traditional principles of insurance risk management are based on statistically measurable and predictable distributions of events which allow insurers to finance losses of random occurrences of relatively modest magnitudes through contributions of policy holders. The widely accepted practice of insurance in the world's largest market economies reflects, ironically, a collective method of socialising losses in a way where burden sharing is accepted given the random element of risk at the individual level. However, *catastrophic* events are much less frequent but very large in terms of loss potential (see Fig. 1). Thus, diversification of such losses is difficult even at a global level where such events have the potential of absorbing huge quantities of capital. This calls for examining the best means of funding risks in catastrophe prone areas and vulnerable states such as the Caribbean islands or other economies prone to natural disasters. The Caribbean is particularly subject to frequent hurricane risks but is also exposed to earthquake and volcanic risks.

The Insurance Services Office of the USA highlights the issue of catastrophic risk management, which applies equally to the high risk exposures in the USA and in the Caribbean:

The infrequency and high severity of catastrophes contribute to insufficient capital in the property/casualty industry to absorb losses from megacatastrophes. The

Figure 1. Statistical Distributions of Loss Probabilities for Normally Distributed Risks versus Catastrophic Risks



traditional methods of dealing with large losses from catastrophes, such as reinsurance and guaranty funds, are also inadequate. Individual insurer actions to limit their exposure to catastrophe losses have led to availability problems for insureds in high risk areas. Solutions to the shortage of surplus to manage catastrophe risk, and to availability problems, will require access to capital from outside the industry.[1]

The same report also states:

The volatility of catastrophe prone lines limits the amount of exposure an insurer can safely write. In the wake of recent catastrophes, insurers are reexamining the extent of their exposure in catastrophe prone areas. Several insurers have attempted to limit the risk to their surplus (capital), leading to local availability problems for the insureds.

The problem of dealing with catastrophic risks is also expressed by Goldman Sachs in its Fixed Income Research series on insurance linked securities:

Most insurance coverage involves individual events that have a significant economic impact on a single insured entity but are small relative to the reserves of the insurance company providing coverage. The insurance company is able to pool such independent risks and charge premiums based on its administrative costs and its actuarial assessment of the events. In contrast, natural catastrophes such as hurricanes and earthquakes involve a large number of insured entities and have the potential for very large aggregate claims. In contrast to the typical 'high frequency, low severity' risks that insurance companies are easily able to manage, such 'low frequency, high severity' risks present particular difficulties.

[1]Insurance Services Office, 'Managing Catastrophe Risk', ISO Insurance Issues Series, May 1996.

Currently, the insurance industry's capital and surplus in the world stands at close to US$1 trillion equivalent. However, major global reinsurers recognise that disaster insurance is severely lacking in many regions of the world, given the actuarial estimates of future events and potential damages. In contrast to the insurance industry, the global capital market capacity stands at approximately US$42 trillion, or close to 50 times the capital available from the insurance industry, estimated at US$850 billion.[1] Therefore, given the increasing concentrations of property values insured as well as scientific projections showing recurring cycles of increased hazard frequencies of hurricanes, it only seems logical that insurance coverage for mega catastrophes will eventually seek capital market financing to complement the limited insurance capital if major events indeed materialise in the next two decades. The instrumentalities for this are elaborated later in this paper. Compounding the problem is the fact that dollar-value concentrations of property in catastrophe prone urban areas continue to increase requiring higher and higher amounts of coverage.

At the present time, reinsurance[2] is readily available for most islands in the East Caribbean and prices dropped from end-1994 through 1999. However, this situation could change rapidly if a major catastrophe hits the region, or if there is a tightening in world catastrophe reinsurance markets such as that which occurred in early 2000. There were predictions then that rates could harden following the relatively active 1999 hurricane season and windstorms at a global level. Not surprisingly, given this volatility in the marketplace, pricing is also highly volatile. After Hurricane Andrew in 1992 which impacted on the Florida and Caribbean markets, there was a severe tightening in world catastrophe reinsurance markets, and prices for primary insurance more than doubled in some areas. Since that time, the market has eased and rates continued to fall during 1999. The following rates for a small ESC island, however, are typical of pricing during the 1990s (see Table 1).

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[1]*Source:* Goldman Sachs, U.S. Insurance Services Office; FIBV International Federation of Stock Exchanges; Guy Carpenter / Marsh McLennan.

[2]The term 'reinsurance' refers to the insuring of an insurance company's underwritten portfolio by another larger insurer (the reinsurer). That is, after a primary (or local) insurance company insures its policy holders, it then 'buys' insurance for part of its portfolio from a larger (usually global) company. This is referred to as 'reinsurance', i.e. the transferring of part of the original insurer's portfolio to a 'reinsurer' at a price (the reinsurance premium), with the result that the reinsurer takes the risk for that part of the portfolio transferred.

Table 1. Average Rate for Property Insurance
(Price as basis points of total value insured)

Year	Rate	% change
1990	40	
1994	130	225
1998	70	(46)

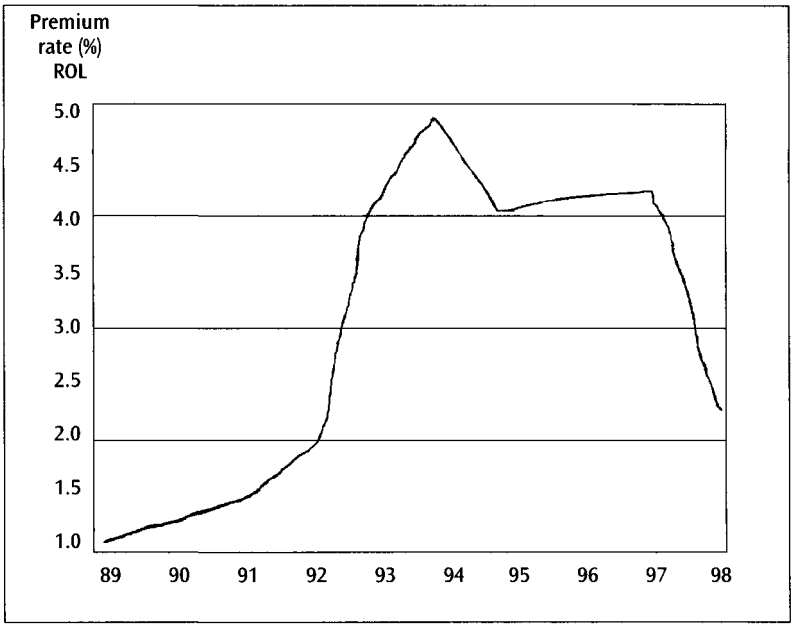
However, while the price adjustment increases were swift, due to the capacity constraints the subsequent reduction and stabilisation of prices took years, with such adjustments occurring with substantial lags following the return of insurance capacity to the market.

In 1990, the average rate for property insurance in moderate-risk countries in the East Caribbean was 0.4 per cent, meaning that for a $100,000 limit on a property the insured would pay $400. Following Hurricane Andrew in 1992, prices surged, reaching 1.3 per cent in 1994. Since 1994, the world catastrophe reinsurance market has improved, and rates declined to an estimated 0.70 per cent for 1998 and remained so through 1999. What is clear from this, however, is that the price of insurance tripled for property owners in the East Caribbean, without any change in some of the islands' underlying risks. Many countries suffered no hurricane losses over this period. The price fluctuations reflected changes in the supply of catastrophe reinsurance following disasters in Florida and around the world.[1] It also reflected a changed perception by reinsurers on the potential cost of hurricanes. After Hurricane Andrew, insurers increased their estimates of the potential losses from catastrophes by a factor of 3 to 4 times.[2] Figure 2 not only takes into account the price increases, but also the supply shortages, which were reflected in higher retentions of risk by the primary insurers.

[1]For a more detailed analysis of this 'supply crunch', see Froot, Kenneth, 'The Limited Financing of Catastrophic Risk', September 1997 and 'The Pricing of U.S. Catastrophe Insurance', March 1997, Harvard Business School and National Bureau of Economic Research. Froot shows how increasing reinsurance prices simultaneously with less coverage purchased inherently reflects a supply shift, with reinsurers reducing the availability of catastrophic coverage.

[2]There was a severe tightening in world catastrophe reinsurance markets following Hurricane Andrew which hit Florida in August 1992 and generated about US$18 billion in insured losses. In 1993, insurance prices were between 5 and 7 times their historical average. Since 1995, however, the market has eased and during the 1997–98 El Niño period the Atlantic hurricane season was abnormally low due to the stronger northern Jet Stream effect which penetrated further eastward into the Atlantic and prevented usual hurricane formations. However, a renewed hazard event frequency (both in the Caribbean and world-wide) could easily cause a reversion to tight conditions.

Figure 2. Global Reinsurance Rates, 1989–98 price index



Source: Guy Carpenter

This is particularly relevant since direct insurance rates for property in ESC countries are greatly influenced by the cost of reinsurance. In general, over 80 per cent of gross written premiums and insurance risks for property, are ceded to reinsurers.

Excess of loss reinsurance rates (rates-on-line)[1] followed the same pattern both in the Caribbean as a whole and in the OECS countries (see Fig. 3). High volatility was experienced in excess of loss premiums at the middle (50 per cent) layer of reinsurance cover, that is, at the midpoint in the range of excess-of-loss coverage layers. The period between 1993–95 was the peak with rates on line reaching 7 per cent. At the lower layers of cover which would be accessed more often (for example the first 5 per cent), rates were much higher during 1993–95, in some countries reaching up to 16 per cent of loss amounts insured.

[1]The term 'rate on line' refers to the premium dollar price as a percentage of the loss level (in $ damages) to be covered under an excess of loss contract. In this sense it is akin to cost of capital or the interest cost of capital. Rate on line should not be confused with the premium as a percentage of total insured value. Since rate on line is the price of compensation for exact losses measured in dollar terms, such loss levels are generally a sub-set of the total insured value (and based on a probabilistic application to expected and maximum losses).

Figure 3. Historical Excess of Loss Reinsurance Rates

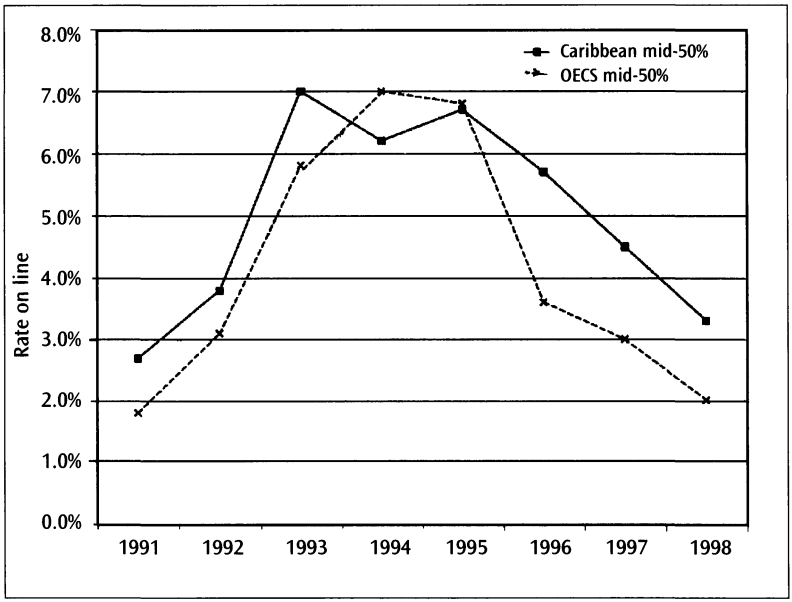
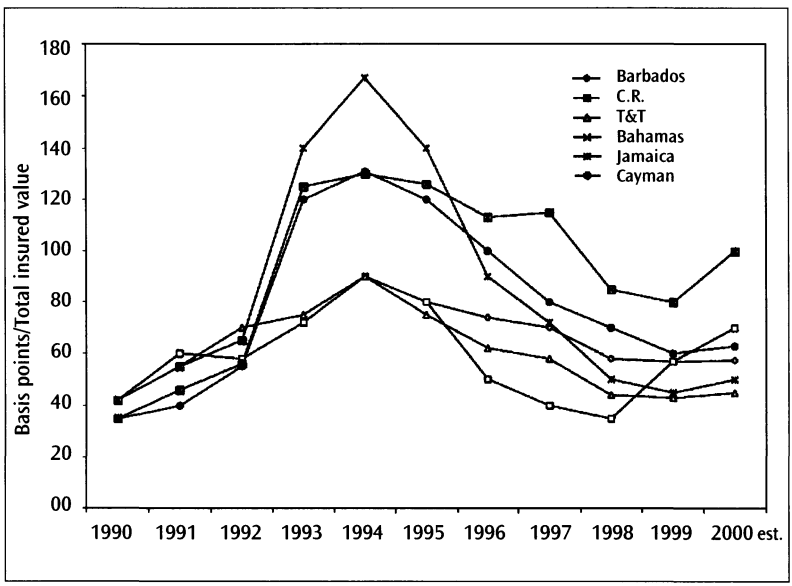


Figure 4. Average Caribbean Catastrophe Rates – Commercial Properties



This pattern was experienced across the wider Caribbean as Figure 4 shows for catastrophe primary premium rates on commercial property, where volatility was particularly apparent in rates charged in countries such as Jamaica, but also the Bahamas and Cayman Islands. The volatility parameters are summarised in Table 2.

Table 2. Volatility Indicators of Global and Caribbean Reinsurance and Primary Insurance Rates

	Standard deviation (%)	Rate mean (%)	Standard deviation normalised to mean (%)
Global XL rate price index	1.3	2.7	49
Caribbean XL rates (50% mid-point)	1.6	5.2	31
OECS XL rates (50% mid-point)	2.1	4.4	48
Barbados Commercial rates	0.13	0.65	20
Dominican Republic Commercial rates	0.17	0.59	29
Trinidad & Tobago Commercial rates	0.16	0.6	27
The Bahamas Commercial rates	0.34	0.92	37
Jamaica Commercial rates	0.45	0.83	54
Cayman Islands Commercial rates	0.34	0.79	42

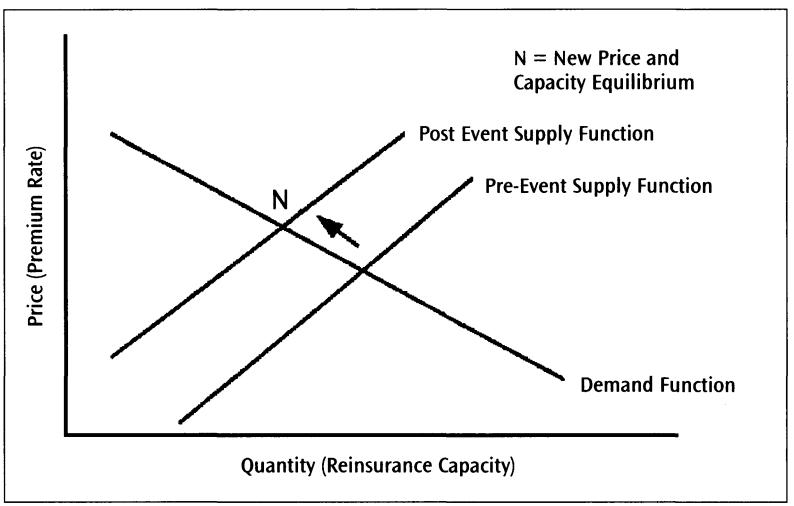
The key indicator to take account of this is the standard deviation normalised to the mean (coefficient of variation). This shows the actual percentage deviation of the rates from the mean over the period. As can be seen, the global excess-of-loss reinsurance (XL) price index had a percentage standard deviation of 49 per cent around the mean and OECS XL rates were similar at 48 per cent. Primary rates in Jamaica were at record highs, showing a percentage standard deviation of 54 per cent, in part due to both the effects of Hurricane Andrew in 1992 and Hurricane Gilbert in 1988 which hit Jamaica directly .

The above analysis shows the large volatility in insurance pricing which affects the Caribbean. Following Hurricane Andrew, additional reinsur-

ance capacity was created in the Bermuda market as traditional major reinsurers such as Munich Re exited the Caribbean market and world reinsurance prices increased. This additional capacity, along with the global development of capital market instruments such as catastrophe bonds financed in the capital markets, have helped stabilise volatility. Nevertheless, future volatility cannot be ruled out, and even a fraction of that seen in the past would be destabilising to Caribbean insurance markets and the availability of coverage needed against natural hazards.

Within this context, it is observed that a type of 'contagion' effect occurs globally when major disasters use up significant portions of reinsurer capacity. While this contagion does not occur in the same manner as emerging market jitters occur during economic crises, it has a similar effect and essentially reflects supply constraints which result in higher pricing to reach a new supply/demand equilibrium. Such adjustments are widely recognised by insurers and reinsurers alike, and reflect a 'recovery' effort by both insurance and reinsurance providers for capital lost or depleted due to large events. In this sense, catastrophe reinsurance contains elements of risk financing ('finite insurance') to fund the insured party, with compensatory payback obtained through temporarily higher rates. It is widely stated in the industry, therefore, that due to large catastrophe exposures, the low rates seen in the last two years will not continue.

Figure 5. Supply Shift and Demand Effect after Catastrophes



Another factor affecting the stable supply of catastrophe reinsurance relates to the manner in which the market is organised. As expressed in Goldman Sachs' Fixed Income Research on Insurance Linked Securities:

Natural catastrophes such as hurricanes and earthquakes reduce private wealth just as do economic losses on diversified portfolios of stocks and bonds. Nevertheless, a substantial portion of this exposure is borne by private corporations (privately held reinsurance companies) and small numbers of wealthy individuals (Lloyds unincorporated names). This inefficient sharing of risk has resulted in high reinsurance rates and has motivated many primary insurance companies to maintain very large retained exposures and to cease issuing new or renewal policies in selected areas. A more efficient risk sharing procedure would allow the capital markets to spread the risk among large numbers of investors to whom this exposure is a very small portion of their total risk exposure.

Goldman Sachs: Fixed Income Research Series on Insurance Linked Securities

Professor Kenneth Froot of Harvard University, similarly points out some aspects of these market inefficiencies and why catastrophe risk is distributed inefficiently:

Another reason institutional arrangements may be inefficient is that the lack of objective information acts as a kind of barrier to entry. When objective information is costly to assemble, a greater investment is required to get into the underwriting business. Indeed, when objective information is in short supply, markets tend to be organised around relationships and reputation. By contrast, when objective information is plentiful, markets tend to be organised around transactions, with the players being more interchangeable. Because newcomers are discouraged from entering the market, the incumbents who specialise in underwriting cat risks, such as cat-risk reinsurers, can more easily charge high prices.

'The Market for Catastrophic Risk: A Clinical Examination', August 1999

However, information can be improved through institutional strengthening to increase the collection and dissemination of critical information. In the USA, for example, the Insurance Services Office enables insurers to achieve and share economies of scale in the collection and analysis of data. Such institutions contribute to improved underwriting and pricing decisions on the part of individual insurers by making pooled data and analyses of pooled data widely available.

Global reinsurance capacity and the Caribbean market

1999 was the third highest loss year in terms of insured losses from catastrophes ($18 billion), with associated economic losses of $80 billion. Similarly, 1998 was the fourth highest loss year in terms of catastrophes causing global insured losses amounting to $15 billion and overall economic losses of $94 billion. This compares to catastrophe insured losses of approximately $27 billion in 1992 and $18.4 billion in 1994, the two years of highest losses to date. Of the $15 billion in losses in 1998, almost

80 per cent were due to windstorm disasters. Catastrophe excess of loss reinsurance cover globally amounted to about $75 billion, and this represented, on average, 40 per cent of total coverage, with the remainder held by primary insurers or under quota share treaties. The earthquake share of insured and total economic losses in 1999 was substantial, representing over 35 per cent of total losses.

Thus recent annual losses world-wide averaging around $20 billion would represent about 27 per cent of the current excess of loss capacity and 11 per cent of total available insurance and reinsurance before considering the net surplus capital in the industry. If future windstorms (hurricanes, typhoons, cyclones) increase, or if property affected were in a high value area such as Miami, Florida, there would be likely to be a squeeze on available reinsurance capacity as additional coverage to protect against large events would reach into the limits of global reinsurance capacity.

While potential devastating events globally could in aggregate cause up to $200 billion in insured losses, this scenario will, statistically speaking, not occur in any single year or closely consecutive years. However, because of these constraints and the potential for world-wide catastrophes to significantly 'bite' into the reinsurance market's capacity, the consideration of alternative risk transfer and financing instrument makes sense in the context of providing additional available risk financing via the world's capital markets.

Table 3 indicates that in the period following Hurricane Andrew, the rates for ESC nations were generally in line with, or higher than, those for Miami, but much higher than the rates for the less hurricane exposed cities of Tampa and Tallahassee. Thus the international insurance pricing equally affected those areas affected by the hurricane (Florida, Bahamas) and those Caribbean countries which were not affected.

The pricing for excess of loss reinsurance, i.e., the rate-on-line, varies by type of risk. A primary company writing in a low catastrophe exposed area will pay the lowest rates on line. Rates also vary by retention level. The rate on line for $15 million in coverage above a retention level of $10 million will be much higher than for $15 million above a $100 million retention level.[1] This is because there is a higher probability of losses exceeding $15 million than exceeding $100 million.

[1]Retention level is the insured amount that is 'retained' by the original/primary insurer after it has 'reinsured' or 'ceded' a portion of its portfolio to the reinsurer. In the East Caribbean, primary insurers reinsure on average 80 per cent of their portfolio, thus effectively retaining only 20 per cent as an insurance risk on their books.

Table 3. Base Property Rates (on insured value) for ESC Countries compared with Coastal Areas in the USA (1994–post Hurricane Andrew)

	Price in % per $0.1 million limit
ESC and other CARICOM countries	
Antigua	1.10
Bahamas	1.20
Barbados	1.00
Belize	0.90
Dominica	0.90
Grenada	1.02
Montserrat	1.00
St. Kitts-Nevis	0.95
St. Lucia	1.15
St. Vincent	1.05
Trinidad & Tobago	0.77
Turks & Caicos (associate member)	1.11
USA (Florida)	
Miami	0.99
Tampa	0.59
Tallahassee	0.43

Rates on line for ESC countries vary from 25–30 per cent at the lowest levels of retention (with highest exposure and probability) to 2–3 per cent at the top levels. An average level would be 9 per cent. Retention levels for the ESC countries are much lower on average than for US insurers, but exposure to hazards are higher. Initially this makes sense from the perspective of 'transferring the risk' outside the affected countries into the international market. However, as the subsequent analysis will show, excessive transfer abroad with very little retention can also be sub-optimal from a cost-effectiveness and risk-sharing point of view.

A different approach to addressing the issue of adequacy of prices is to compare rates on line with 'pure' rates developed by models which project hazard frequencies and their intensity in terms of damage functions. This paper addresses this issue in the sections on hazard and financial modelling. The methodology used for this purpose includes the steps shown in Figure 6.

Under the damage module, a vulnerability function for property structures is established against levels of hazard intensity. This is the 'real sector' input used for subsequent financial modelling for insurance.

Figure 6

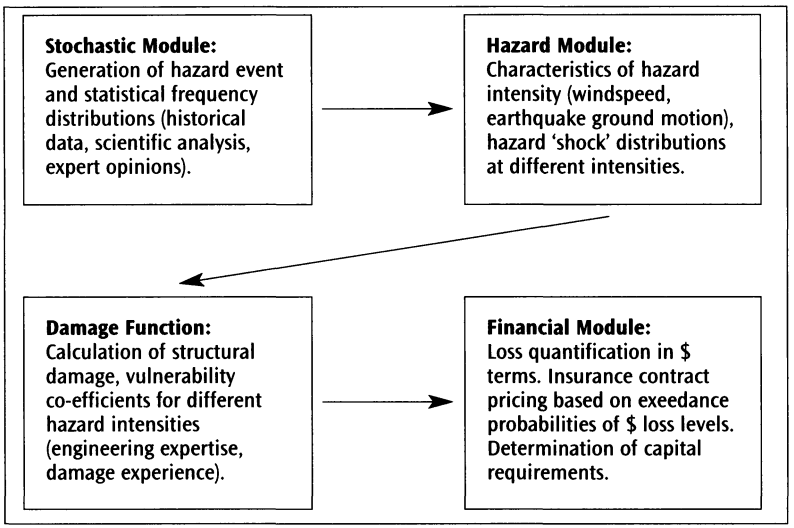


Figure 7

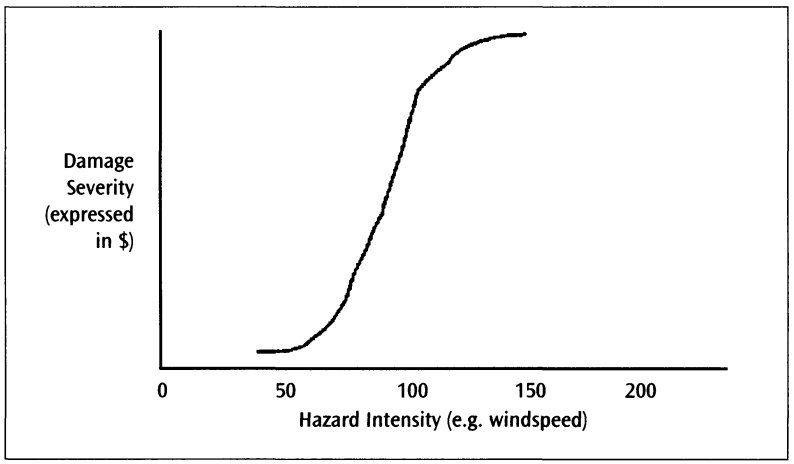


Figure 7 reflects the typical 'S' shape damage/severity function for hurricanes. At the lower wind speeds, the damage function increases more slowly in proportion to the increase in wind speed. As the winds surpass 100 mph, the damage level begins increasing proportionately at a higher rate. After reaching top winds, the damage function decreases in its 'acceleration' since the incremental wind speed does little additional damage to the gross destruction already done.

To provide some perspective on the context of this risk market, it is estimated that the ESC countries generate currently about $150 million in insurance premiums. Most ESC countries face a high level of risk. The islands are in the front line of Atlantic storm activity. A number of the islands have significant earthquake risk as well. A few countries have a volcano risk, most notably Montserrat, where an eruption in 1996 caused extensive damage.

Projections by risk management firms show that the East Caribbean region can expect 2.5 storms every year. Severe hurricanes, defined as category 3, 4 and 5, have, up until the late 1990s, been less common. Category 3 hurricanes can be expected to occur every second year, and Category 5 storms every fifth year.

Table 4 reviews recent hurricane experience.

Table 4. Hurricanes which Affected Caribbean Countries, 1970–99

Year	Hurricane	Country
1974	Carmen	Jamaica
1974	Fifi	Belize, Jamaica
1979	David	Dominica
1980	Allen	Barbados, St. Lucia, St. Vincent, Jamaica
1984	Klaus	Dominica
1985	Gloria	Antigua, St.Kitts, Turks & Caicos, Anguilla
1987	Emily	Grenada, St. Vincent
1987	Floyd	Bahamas
1988	Gilbert	Dominica, Jamaica, G. Cayman, St. Lucia
1988	Joan	Tobago
1989	Hugo	Antigua, Dominica, Guadeloupe, Montserrat, St. Kitts-Nevis
1992	Andrew	Bahamas
1994	Debbie	St. Lucia
1995	Iris	Antigua, Dominica, St. Vincent, Trinidad & Tobago
1995	Erin	Bahamas
1995	Marilyn	Dominica
1995	Luis	Anguilla, Antigua, Dominica, Montserrat, St. Kitts-Nevis
1998	Georges	St. Kitts-Nevis, Antigua
1999	Floyd	Bahamas
1999	Jose	St. Kitts-Nevis, Antigua
1999	Lenny	St. Lucia, Grenada, St. Kitts-Nevis, Dominica, St. Vincent

The experience of the twenty-year period suggests that the Caribbean countries would be damaged by two tropical storms each year and by a hurricane every two years. In general, climatologists view the 1969 to 1989 period as *below* average in terms of cyclonic activity in the Atlantic. So far, nine hurricanes have hit the Caribbean islands in the 1990s, or an average of almost one per year, double the rate of the prior 20 years.

There are significant regional differences in exposure, however. Northern and eastern islands are more exposed than southern islands. The Leeward Islands, including Antigua, Montserrat and St. Kitts-Nevis, are viewed as being most exposed, while Trinidad and Tobago have minimal exposure.

Insurance loss modelling thus involves three main steps. An assessment is made of the probability of the underlying natural phenomena, either hurricane storms, or earthquakes and their intensities. This information is developed from historical meteorological and seismic data. The second step is to assess the exposure level and vulnerability of insured property to differing hazard intensities (see Fig. 7). The third step is to combine the information from the first two steps and produce a probable loss distribution in dollar terms.

To illustrate, consider an extremely simple example of a small island, subject to only a category 2-type hurricane. The probability of such a hurricane striking the island is 10 per cent. In other words, it can be expected that such a hurricane will hit the island once every ten years. The value of insured property on the island is $100 million. It is estimated that a category 2 storm hitting the island will cause $20 million in insured loss. This information can then be used to calculate appropriate annual insurance rates and to decide on the maximum capital ($20 million) needed in any given year to pay losses. Insurance loss modelling develops data on these two main figures – annual average loss and probabilities of maximum losses – from data on multiple meteorological or seismological events.

The nature of catastrophic risk

Catastrophic risks in primary markets tend to be spread temporally more than spatially. For example, prior to Hurricane Andrew, insurance companies added a 14 per cent catastrophic property factor to insurance premiums in Florida. With residential insurance premiums totaling $1.2 billion in 1992, this resulted in the catastrophe portion of premiums of $168 million per year. This factor was based on loss data for 30 to 40 years. The assumption was that catastrophe losses would average out to 14 per cent of the premium over 40 years. In any single year, a large hurricane could cause losses many times the $168 million in premium. However, the companies assumed that over a 30 to 40 year period they would break even.

The pricing of catastrophe reinsurance is based on the notion of spreading risk over time. The reinsurance company promises to indemnify the primary company for losses above a retention level. For example, a primary insurance company might purchase reinsurance for catastrophe losses between $20 million and $30 million. In pricing this $10 million layer of insurance, the reinsurer will first estimate the probability of loss in this range. Let us assume that this probability is 10 per cent. In other words, the reinsurer believes that once every ten years the primary insurer will need to pay losses of $20 million or more. If the reinsurer charges a rate of 10 per cent it will break even over time. This rate is known as the 'pure premium'. To come up with the final rate, the reinsurer adds a factor for expenses and profit. The final rate is expressed as a percentage of the $10 million layer of insurance provided and is called the rate on line, as discussed earlier.

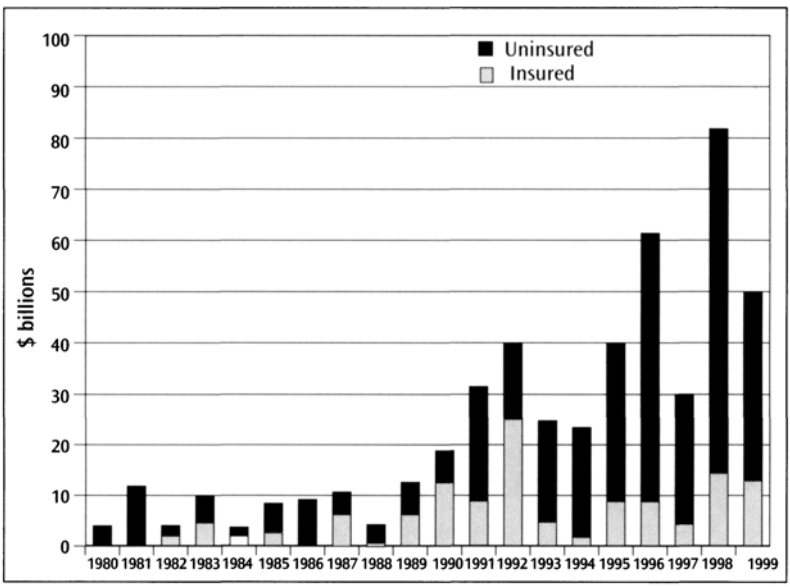
There is a third way that risk is spread by insurance, which is of some relevance to the ESC region. We can label this way as 'speculative'. Insurance organisations provide insurance for somewhat exotic risks such as satellite launches. The pricing of these risks is calculated on a slim, if any, actuarial basis and the risks are not spread over space or time. It could be argued that if enough of these event risks are taken on, they involve a spreading of the risk. In other words, if Lloyd's insures 100 such diverse risks and, by the laws of probability, only one of them results in a claim, then the premiums for the 99 are paying for the loss of the one. Some risks in the ESC region could be viewed as falling into this 'speculative' category. A reinsurance or insurance company with excess capital might take a risk from the ESC region on a 'speculative' basis. The net effect of treating ESC reinsurance risks in this fashion is to create increased volatility in the marketplace. In a period of excess capacity in world-wide reinsurance markets, reinsurance will be readily available to primary companies in the ESC region. In periods of tight capacity, reinsurance will be in short supply.

There is also the danger of a major or even total withdrawal of reinsurance capacity to the region. The state of Hawaii faced this problem following Hurricane Iniki in 1992 and in Fiji in the mid-1980s. Such a withdrawal would have disastrous consequences for the economies concerned. Without insurance, the financing of construction would be greatly diminished. The fact that catastrophe risks are spread over time has two important implications for ESC markets. Reinsurance or risk transfer relationships need to be long term in nature. Major primary insurers around the world have long-term relationships with their reinsurers. So if a reinsurer has a large loss in a particular year, the 'loss' will be made up by payments from the primary company in future years. If reinsurers do not have a long-term relationship then they view a large loss as more in the specula-

tive area where they are making a one-year bet. As a result they will require a higher profit rate for this risk, as has occurred in the ESC region.

Figure 8 shows the economic (unisured) losses and insured losses from 1980 to 1999 for weather-related disasters, globally. From weather-related disasters alone (excluding earthquake), 1998 was the year with the highest total economic losses world-wide. 1999 was the third highest year for total economic losses as well as weather related insured losses. Generally, hurricane and windstorm losses in a given year represent about 70 per cent of total losses, however, in 1999, earthquakes represented almost 40 per cent of insured losses from events in Colombia, Turkey, Greece and Taiwan.

Figure 8. Insured and Uninsured Losses from Weather-related Natural Disasters



Source: Munich Re; Guy Carpenter; WorldWatch

1999 was also a year with significant flood damage in Central Europe and South East Asia, as well as hailstorms in Australia and gale storms in Europe (Lothar, Martin). Windstorm damages include for the USA and the Caribbean damage from Hurricane Floyd, the Orissa cyclone in India, tropical cyclone Bart in Japan, as well as major tornadoes in Oklahoma. Total economic losses from weather-related and earthquake events combined approximated $100 billion in 1999, compared to $93 billion in

1998 and, for all events, insured losses were higher in 1999 as well ($22 billion), compared with 1998. The intensifying loss trends, requiring matching insurance risk capital, can be attributed to increased urbanisation, population growth and the increase, in both number and value, of properties in catastrophe-prone areas, as well as to climatological and environmental changes.

Given the context of global disaster risks, as well as the risk exposure in the Caribbean, the following section examines the operation of the property insurance market in the Caribbean. Based on the nature of catastrophic risk, the organisation and structure of the domestic market in the Caribbean represents the first line of defense for successful risk management. This paper thus identifies some of the domestic industry and regulatory factors which could constrain effective capacity in the management of such risks.

The property insurance market in the Caribbean

The structure of the Caribbean insurance industry has so far depended primarily on a strategy of substantial transfer of insurance risks to the international reinsurance markets. While such a strategy has allowed a reduction in financial exposures, it has also reduced incentives for domestic underwriting and risk management capacities, and has linked the local market development cycle to external market movements. The large number of players in the local domestic markets, together with the practice of extremely modest retentions of risk, does not permit sufficient flexibility at the country level to optimise the risk management, risk transfer and premium pricing options in the most cost-effective manner. The high vulnerability of individual countries calls for improved risk pooling strategies, some of which have been attempted in limited ways in the past. These can help lower the insurance cycle risk while promoting regulatory changes to both strengthen domestic insurance suppliers and promote improved loss reduction measures.

Large catastrophic events like hurricanes have direct costs as they lead not only to large losses of capital stock and inventories but also have indirect costs in lost income, employment or services resulting from lost productive capacity. These events jeopardise internal and external macroeconomic stability, leading to larger than anticipated public sector and balance of payments deficits. For example, the direct effects of Hurricane Gilbert on Jamaica in 1988 amounted to US$956 million, representing 27 per cent of GDP, with half of the losses in agriculture, tourism and industry, 30 per cent in housing and 20 per cent in economic infrastructure. As a result of the hurricane, losses in export earnings were

estimated at US$130 million, representing 14 per cent of exports, and the government incurred US$220 million in additional expenditure, while the public sector deficit increased from a projected 2.8 per cent of GDP to 10.6 per cent, fuelling inflation.

While 80 per cent of the gross property insurance premiums are transferred to reinsurers, the actual remittance flow is reduced by the reinsurance commission paid by reinsurers (for example 30% of 80% = 24%). A year with abnormally high property claims can, of course, result in a net remittance inflow from reinsurers. Tight reinsurance conditions, i.e. a high-priced market, can give very good results for well-managed Caribbean companies, as high reinsurance costs materially boost reinsurance commission incomes. Policy coverage restrictions are generally designed and imposed by foreign reinsurers and their effect falls on the policy holders rather than on the insurance companies.

Historically, there have been very mixed feelings as to whether the industry should play a proactive role in promoting hazard and vulnerability mitigation measures. While not denying the inherent benefit of such measures, the insurance companies' concerns centre on the implementation complexities and costs, particularly as reinsurers are seen as unlikely to share in these costs. Companies view the leadership role for mitigation measures as lying with their governments.

The insurance markets are intensively competitive for the property insurance classes – a competition primarily seeking reinsurance commission revenues rather than underwriting, or 'risk taking', profits. The larger Caribbean insurance markets contain insurance companies (with sizeable market shares), forming part of broader commercial groups. It is estimated, however, that several insurance companies are under-capitalised and that markets are saturated. New regulations expected to come into effect in Barbados, the OECS and Trinidad and Tobago will significantly increase capital requirements, probably leading to mergers and buy-outs within the local industry.

Observations on East Caribbean market characteristics

The proportion of residential and commercial properties in the Caribbean covered by insurance is significantly higher than in most developing countries, on account both of the susceptibility to natural disasters and the influence of tourism and the requisite insurance of tourist facilities. In comparison with the insurance density in the USA (3.3 per cent of GDP for the property and casualty business), the average for the OECS, Barbados, and Trinidad and Tobago is 2.3 per cent of the countries' combined GDP.

Table 5. Structure of the East Caribbean General/Property Insurance Market, 1998

	Number of general insurance companies	Foreign companies[1] (% of total)	Property insurance premiums (gross) ($ million)	Gross premiums (% of GDP)
Antigua and Barbuda	16	88	10.6	1.8
Barbados	22	45	43.0	3.0
Dominica	13	95	5.8	2.4
Grenada	19	76	8.6	2.7
St. Kitts-Nevis	9	67	6.3	2.4
St. Lucia	21	86	11.9	2.1
St. Vincent and the Grenadines	12	85	9.6	3.3
Trinidad and Tobago	29	12	52.1	0.9
Total	141	66	148	—

[1]Of these, approximately three-quarters are companies from Trinidad, Barbados and Guyana.

However, there are a large number of general/property insurance companies in the East Caribbean. The ratio of premiums earned ($149 million) to the number of primary companies writing property business (numbering 145) is just a little over $1 million, i.e. the average premium written per company. In contrast, the average premium written per company in the USA (with 2,500 companies in total), is $112 million or a multiple of 100 times that in the East Caribbean. Such a comparison may not necessarily be meaningful, given the different levels of development and insurance markets. Nevertheless, if one takes the relative populations serviced by insurance companies, the results are that 14,000 inhabitants are served by each insurance company in the East Caribbean, compared with 107,000 in the USA. This would suggest a potentially over-extended industry in the East Caribbean which implies inefficiencies of scale in terms of both operating costs and risk management. A significant share of companies, however, effectively function as agencies with little desire to operate as genuine risk underwriters.

While most of the East Caribbean countries do not admit non-registered insurance companies, the actual insured base in each country is likely to be higher than reported due to non-admitted providers. In those countries where non-registered companies are allowed to conduct business,

Table 6. Insurance Sector Regulatory Characteristic in the East Caribbean Markets ($US dollars equivalent)

	Minimum capital requirement	Solvency margin (assets/ liabilities) above premium income	Reserve requirement	Premium tax	Corporate tax
Antigua and Barbuda	$0.07m	Min. capital or 10% of premium income	n.a.	n.a.	40%
Barbados	$1.5m	$0.25m or 25% of premium income	40% of annual premium income	5%	40%
Dominica	$0.07m	Min. capital or 10% of premium income	30% of annual premium income	None	30%
Grenada	$0.09m	$0.06 m or10% of premium income	n.a.	n.a.	30%
St. Kitts-Nevis	$0.07m	Min. capital or 10% of premium income	10% of annual premium	5%	38%
St. Lucia	Local $10m Foreign $0.20m	$0.07m or 20% of premium income	40% of annual premium income	Local 3% Foreign 5%	33.3%
St. Vincent and the Grenadines	$0.07m	Min. capital or 10% of premium income	n.a.	3%	40%
Trinidad and Tobago	$0.16m	Min. capital or 20% of premium income	40% of premium income	6%	35%

large commercial and tourist properties are directly insured abroad. Due to the non-reporting nature of these businesses at the Caribbean level, figures on this market are difficult to estimate although via the tallying of the total market value of insurable assets and comparison of these with the premiums collected annually, one could, by process of elimination, deduce the quantity of assets insured directly abroad.

On average, 75 per cent of the OECS market is held by Trinidadian and Barbadian companies. Thus, the East Caribbean insurance market (prior to reinsurance) is effectively a Barbados and Trinidad dominated market.

Regulatory developments

Solvency margin regulations generally follow the EU regulatory systems whereby such margins are indicated by capital requirements of at least 20 per cent of premium income. In Trinidad and Tobago, features of the Canadian system were adopted. However, new Canadian norms recently developed include additional safeguards such as the provision for catastrophe reserving for earthquakes, a practice which would equally apply to the hurricane and wind storm risks in the Caribbean.

Expense ratios in the Caribbean are relatively high, 30–40 per cent of premium income compared to the US average expense ratio of 26–28 per cent. Expense ratios reflect the costs of business acquisition, brokerage fees, underwriting fees, administrative costs and overhead as a percentage of annual premiums earned. In the Caribbean, due to the relatively small size of companies and diseconomies of scale, expense ratios constitute a higher percentage of annual premium income, despite the fact that administrative and staff costs are generally lower than in the USA. Such costs, as well as low retentions of underwriting risks, prevent a quicker build up of capital reserves/surplus than could otherwise be achieved.

A new OECS Insurance Act is under review by those member governments, and this would substantially raise minimum capital requirements as in Trinidad. In Trinidad and Tobago, the minimum capital requirement will be changed to $1.6 million to be phased in within five years. The new OECS Act would require minimum capital of $0.9 million for local companies and a requirement of $1.8 for foreign companies. The differentiation is meant to provide a competitive adaptation period for indigenous companies to reduce costs and increase their scale economies, and for foreign companies, to ensure that sufficient capital for operations and claims settlement, is maintained. In Grenada and St. Lucia existing regulations already provide for differentiated capital requirements for foreign companies. The new insurance legislation, however, will attempt to harmonise the regulatory requirements across all of the OECS to include uniform solvency margins (for example 20 per cent of premium).

In OECS countries, all insurers must be registered locally, whether foreign or domestic. In contrast, Barbados and Trinidad and Tobago have separate regulations for non-registered foreign companies, although there is concern about monitoring such business more carefully given the non-reporting of such entities.

In terms of exchange controls, approval by most central banks is required for transfers above a specified level (as in the banking sector) and in some cases a remittance charge of 1 per cent is applied to premiums ceded to reinsurers. However, these regulations are being relaxed in line with WTO standards, and thresholds requiring approval are being increased.

Reserve requirements are generally high and require prescribed investments of surplus of companies, a factor which might reduce overall profitability if other more high-yielding investment opportunities become available. Premium (sales) taxes, corporate taxes and stamp taxes vary widely across the East Caribbean – factors which will also require harmonisation if further market integration and pooling structures are to be considered.

Catastrophe insurance reserves

Insurance company reserves fall into two basic categories. The first is the shareholders' capital and free 'surplus' reserves and the second, the insurance or 'technical' reserves. The latter are customarily tax deductible, being constituted for known liabilities such as payment of reported but unpaid claims and the unexpired portion of pre-paid (for example annual) premiums. In effect, the capital and free reserves represent the solvency margin and are intended as the last asset resource should the technical reserves prove inadequate.

Relating these considerations to natural hazard peril insurance, there are two particular factors. First, although catastrophes are accepted as severe but infrequent events, in accounting terms (Generally Accepted Accounting Principles (GAAP)), they cannot be precisely forecast as to timing or amount. Secondly, over 80 per cent of the insured catastrophe liabilities fall under reinsurance contracts placed mostly outside the Caribbean. These two factors prompt a local insurer firstly to determine how to prudently reserve for the net liability retention (approximately 20 per cent) before the catastrophe event occurs, and secondly consider how to ensure that the reinsurers are financially secure enough to meet their liabilities fully and on time for the lion's share (over 80 per cent) of the liabilities.

On the first challenge, Caribbean insurers were, until recently, discouraged by existing tax laws from setting up specific reserve provisions for catastrophe perils before a catastrophe event. Several Caribbean countries are now permitting tax deductibility for such dedicated reserves. Without this dispensation, very little of premium paid becomes available to meet future catastrophe claims liabilities under issued policies. In the absence of a natural hazard event, less than 20 per cent of premiums customarily see their way to increasing free reserves. Operating expenses can

characteristically consume 40 per cent of premiums, income tax about 35 per cent, and a 40 per cent dividend policy on the remainder would use up a further 10 per cent, thereby leaving approximately 15 per cent to be passed on to free reserves. Hence, in the policy holder's interest, dedicated, properly monitored, tax deductible catastrophe reserves should be allowed.

Some larger and special risk categories (for example power utilities), have also over recent years found it impossible to obtain full, and in some cases, any, affordable insurance. On occasions such risks have voluntarily devised very high self-insured deductible levels aimed to cover the expected loss damage potential and separate self-insurance funding for business interruption. These risk management arrangements have served to attract greater levels of insurance/reinsurance cover for the higher, less exposed, risk levels. Furthermore, the insurance cost and availability difficulties have prompted trade associations (for example the Caribbean Hotel Association (CHA)), to employ risk-management techniques and/or offshore captive insurance company arrangements to buy reinsurance on a group basis.

A catastrophe insurer's gross potential liabilities (potential losses on sums insured under natural hazard peril policies) can run into hundreds of millions, if not billions, of dollars. The gross liabilities are reducible to net liabilities though reinsurance. Provision also needs to be made for so-called second event 'reinstatement' scenarios, as reinsurance contracts customarily vary from the primary policies' provisions by limitations on protection amounts available for second (and subsequent) catastrophe occurrences during any one reinsurance contract period. At present, a majority of primary insurers' reinsurance contracts cover second event catastrophe losses.

Clearly, a company's capital and free reserves, plus any dedicated catastrophe reserves (and corresponding assets), need to be readily realisable for these purposes. The assets held to cover a company's insurance or 'technical' reserves should not be considered as available for catastrophe claim payment purposes as these technical liability reserves are constituted for their own specific purposes – customarily to cover prior known reported outstanding claims and the unexpired portion of pre-paid (for example annual) premiums. These observations argue for an insurance company's capital and free reserves plus any dedicated catastrophe reserves, to be seen as strong enough, and readily available, to meet rationally estimated net-of-reinsurance catastrophe liabilities. This paper will show how the pooling of catastrophe risks also improves the efficient frontier for a more optimal capital/exposure ratio.

An insurance company's investment policy should also select investment

instruments which best meet the purposes for which policy holders purchased their insurance, i.e. the invested funds should be secure and available for meeting aggregated claims at unknown future dates. One consideration must be the secondary potential of natural hazard events to adversely affect local financial markets at the time asset realisation is required. Specific regulations should support the view that preferred instruments are found in hard currency financial markets least likely to be impacted by natural catastrophes. Likewise, instruments should be placed in open financial markets entirely on an 'arm's length' basis (without any strings attached, as opposed to some existing regulations which allow up to 20 per cent of assets to be held in intra-industry group holdings).

Regulatory improvements and mitigation of financial risks

The catastrophe insurance market has a parallel with the overall financial services regulation, whereby the 'hazard' to be mitigated may be a liquidity crunch with a potential for a run on a banking system. A natural hazard could provoke a run on an insurance system. Contagion effects, albeit for different reasons, can occur, and in the insurance case this is particularly evident following catastrophes in which the supply of capital has been compromised and demand for coverage surges. In both the banking and insurance examples there is the potential for a secondary 'hazard' of public recriminations if the regulatory performance before the event is perceived to have been inadequate.

Development of strong effective and harmonised insurance regulation, therefore, is recommended to include:

- Minimum capitalisation requirements for local carriers and brokers;
- Solvency and liquidity levels, and adequacy of technical reserves;
- Adequate asset/liability management (including maturity and currency matching where applicable), as well as reinsurance credit risk;
- Incentives and requirements (including tax concessions) to build up catastrophic reserve funds to minimum required levels;
- Minimum standards for non-ceded retention of local coverage;
- Accurate verification and valuation of companies' balance sheet entries to ensure adequate financial capacity to cover claims;
- Increased allowance for overseas investments of insurance assets;
- Industry entry requirements, including admission of suitable foreign competitors;
- Requirements to verify security and reliability of overseas reinsurers

who take on portfolios of local coverage;

- Linkage of insurance regulation to building code compliance prior to providing insurance coverage, or to discounts based on vulnerability reduction measures;
- Monitoring and inspection techniques;
- Conditions for revoking licenses and shutting down operations;
- Consolidated regional and institutional harmonisation of regulators/supervisors.

Recent limited-basis pooling initiatives

For the most part, government physical assets such as buildings, schools, libraries, roads and some hospitals are uninsured or underinsured. Exceptions include Barbados, where the government-owned Insurance Corporation of Barbados is responsible for insuring public assets. Additional exceptions include properties owned by statutory corporations such as port and airport authorities, as well as utility companies that can independently access the insurance markets.

Utility companies, in particular, have been actively considering a regional self-insurance programme with the Caribbean Development Bank (CDB) and the Caribbean Electric Utilities Service Corporation (CARILEC), in order to reduce insurance cost. Although it is still in the conceptual stage, the programme's principal concepts include a backstop credit line in the initial years of premium accumulation. As the fund grows, the utility companies should rely less on the line of credit until it eventually becomes a standby support to be used only after the fund is depleted because of claims arising from a catastrophe event at the uppermost loss levels.

The Barbados Light & Power Company Limited (BLP) started its own self-insurance programme, due to unavailability of Transmission and Distribution (T&D) catastrophe insurance coverage in 1993, and the subsequent extraordinary high rates to obtain the coverage, estimated at 25 per cent of the estimated losses of assets in a catastrophic event. The fund is composed of cash and committed lines of credit. Similar to the regional approach, the lines of credit are to be used only after the cash portion of the fund is depleted. BLP is now able to look at its insurance needs from a more reasonably priced excess-of-loss layer, above the level of its self-insurance fund. The company estimates very significant annual premium cost savings.

In 1993, the Caribbean Hotel Association retained a US-based risk management firm to perform a pan-Caribbean study regarding windstorm risks

to its members' properties to see if there was some way of reducing the upward spiraling costs of insurance. The computer-generated wind study performed by a sub-contractor of the risk management firm provided a probable maximum loss profile of the region and divided the Caribbean into six different risk zones. The study suggested that there appeared to be enough diversification of risks among these zones to allow a regional insurance company for the CHA properties to survive a 1.3 per cent probability of a major storm disaster event. Using the expected loss (EPL) information as the starting point, and based on their own financial modelling capabilities, the risk management firm determined a capitalisation figure for a regional insurance company to sell 'all risks' property insurance to each of the 1,000 or so CHA members. The risk management firm then created, and today manages, a Bermuda insurance company whose exclusive clientele are members of the CHA.

Incentives and disincentives to risk-based pricing

For many home owners, the answer to soaring insurance rates, during the three years following 1992, was to reduce or eliminate their coverage. With the lack of statistics, it is difficult to measure the degree to which capital stocks are under-insured, though 30 per cent is estimated in the insurable housing sector, and in most ESC countries few government assets and buildings are insured. From an insurance industry perspective, under-insurance is business lost which would otherwise carry little incremental acquisition cost. Furthermore, policy holders who terminate their insurance seldom return. Insurance is a discretionary expense and, once terminated, becomes excluded from buying patterns. Local government is, of course, concerned, since the greater the non-insurance (or under-insurance) by a population, the longer it takes for the local economy to recover from catastrophic events.

Two local trends, as yet slowly evolving, may suggest some change in strategy in the markets. The first is the setting up of tax deductible dedicated catastrophic reserve funds by a few insurers. This, at current understood levels, will take a long time to justify reduced reliance on reinsurance. Secondly, there is some increase in the buying of 'excess-of-loss' reinsurance as opposed to the traditional 'proportional' or 'quota share' reinsurance. The former is perceived to be more costly up front, making this strategy affordable only for the financially stronger companies; however, its use can permit better risk management and accumulation of capital for well managed companies. Further trends include several nations' regulatory reforms which embrace very much needed increased minimum capital requirements and tighter solvency ratios for insurance companies.

Regrettably, from an overall disaster mitigation standpoint, there has existed for Caribbean catastrophe insurance companies a strong economic rationale inhibiting the spread of vulnerability reduction measures via insurance incentives. As earlier discussed, blanket reinsurance pricing across a whole portfolio works against encouraging insurance companies' adoption of individual risk discriminatory premium pricing. This argument, on the surface, is valid and is exacerbated by the market's fierce competition for reinsurance commission revenues.

Insurance companies, therefore, have perceived that their primacy lies in obeying the reinsurers' imposed broad pricing methodology and defending their reinsurance commission revenues. They fear that significant premium discounts for the better protected risks (however well merited), cannot be balanced by surcharging the poorer risks, and that they would end up paying the shortfall in reinsurance premium from their own pockets. Given that characteristically the reinsurers' share of catastrophe policies' premiums exceeds 80 per cent, one can appreciate the basis of insurers' attitudes. One could argue that an insurance company should be better off with a portfolio of the better risks, to which discounts had been awarded and would result in fewer claims; this argument, however, has little support because such a strategy implies the loss of the reinsurance commission from the poorer risks no longer insured. This is not, however, necessarily seen as an incentive to reinsurers who take on the bulk of overall catastrophe liabilities, i.e. both the good and poorer risks, since it would imply closer and better monitoring of costs, and more highly differentiated risk pricing.

In addition, Caribbean primary insurer attitudes were also influenced until three years ago by the former tariff market mechanisms which worked to limit price competition. One particular segment of the insurance industry, however, has for over a century been practicing vulnerability reduction as part of its underwriting practices: insurance companies participating in the Factory Mutual (FM) system and the Industrial Risks Insurers (IRI) consortia based in the USA impose stringent design criteria and supervise construction as preconditions for underwriting a property. As a consequence, participating companies, some of which have had links to business in the Caribbean, have a much better understanding of the true risk to which a property is subject and are able to offer much lower premiums than traditional insurance companies.

However, as has already been mentioned, the two inhibitors to encouraging vulnerability reduction measures via premium incentives themselves suffer from being non-discriminatory from a reinsurer's standpoint. Both the blanket portfolio reinsurance premium rate and the reinsurance

commission being commonly priced on all ceded premiums, do little to promote overall risk quality in a reinsurer's accepted portfolio of risks. There are some profit commission arrangements, very limited for 'catastrophe' reinsurance specifically, whereby the earned reinsurance commission rate varies by the loss ratio experienced – i.e. from the claims incurred. Such arrangements still do not directly address portfolio risk quality improvement.

The adaptation of the working of reinsurance premium pricing and reinsurance commission mechanisms is feasible to meet the objective of encouraging improvement in the risk quality of portfolios, and hence allowing discriminatory premium pricing for vulnerability reduction measures by policy holders. What is first required is a set of meaningful and workable risk quality criteria mutually agreed by an insurance company and reinsurers. The implementation of risk-based premium pricing, to be successful, would therefore require a comprehensive hazard mapping effort, the inventorying of all typologies of structures and contents with respect to vulnerability, and certification by engineers of individual risk characteristics. Coupled with the actuarial estimates of event probabilities and intensities, and identifying market values which can be used to calculate probable losses, such an exercise would thus set the base for a more accurate catastrophe risk accounting methodology in the Caribbean insurance industry. This would include classifications of:

- Hazard mapped locations;
- Building type and structure vulnerability characteristics;
- The same as above for building contents;
- Engineering certification for individual risk characteristics – needed to retain discipline and deter discounts being given for 'sales' reasons;
- Application of the above to actuarial/statistical distributions of event probabilities and intensities;
- Determination of fair market value of properties to combine the above factors in establishing expected loss amounts.

To implement such a process, which reflects preconditions for improvements in the insurance markets, it is recommended that a Caribbean privately funded insurance services office be established. Such an institution, which could operate at a regional or sub-regional level, would be well positioned to develop insurance plans by asset class and advise on prospective loss costs, taking into account individual risk characteristics. This would permit primary insurers, at their option, to use such standardised class plans and loss costs in pricing their products. At the request of

insurers, such an office would also provide reinsurers with pertinent data which could facilitate the negotiation of reinsurance contracts. Additionally, functions such as inspections of individual properties would be conducted when requested by individual insurers. A key function would also be to maintain updated insurance and risk data on the local industry.

Factors affecting catastrophe insurance demand

Insurance policies cover the 'natural' catastrophe perils of earthquake, volcano and storm; the last embraces declared hurricanes (>75 mph sustained winds), windstorm, flood and storm surge. Volcano and flood cover is practically unattainable in some areas recognised as particularly prone to these events (for example Montserrat).

Since the late 1980s, full value coverage for catastrophe perils has generally been limited by claims deductibles expressed as percentages of the full insurable values. For earthquake, these deductibles are characteristically 5 per cent, and for hurricane 2 per cent. Soft market conditions in some limited areas have reduced the latter to 1 per cent.

The impact of claims deductibles can be severe to policyholders. As an example, a dwelling valued at $100,000 would only recover above the $2,000 deductible. This amount can be sufficient to meet repair costs for characteristic partial roof damage but this is a very material amount when related to average disposable income levels.

Policy conditions also provide for the amount of claim to be reduced to the extent the amount of insurance purchased (sum insured) is less than the full insurable value at the time of loss (the 'average clause'). Some variations of this exist – for example the adjustment is only made if the policy sum insured is less than 85 per cent of the full market value. Policy holders in Caribbean nations with weak currencies and/or high inflation are especially vulnerable to these provisions.

Socioeconomic and behavioural factors also merit consideration on both the supply and the demand sides of the catastrophe insurance market and it is helpful to segment property assets into their ownership classes:

Private Dwellings	Small/Indigenous, Medium, Large
Private Businesses	Small/Informal, Medium, Large
Public Ownership	Building Structures, Utilities, Public Infrastructures

With regard to private dwellings and business properties, the owners' disposable income levels comprise an important factor in the demand for catastrophe insurance, the annual cost of which is near 1 per cent of a

structure's value. This substantiates the observation that the small/informal sectors only purchase catastrophe insurance to the extent of lending institutions' requirements (and these can be limited to the amount of outstanding loan principal balances). It is estimated that between 25 per cent and 40 per cent of dwelling stock is uninsured with the small/indigenous segment being the least insured. Furthermore, insurance premiums are higher (less affordable) in areas such as the OECS Leeward islands which suffer frequent storm events.

Medium and large dwelling owners, without the same affordability constraints, almost universally carry catastrophe insurance, as is the case with medium and large business property owners. In the case of the latter, business interruption insurance (stoppage as a consequence of catastrophe perils), is seldom purchased although this could mitigate employers' loss of income and employees' loss of pay while a workplace was idle. Larger businesses, especially, have access to insurance brokers (as opposed to insurance companies' own agents), who are adept at placing covers with 'foreign' insurance companies, i.e. companies operating without local registration, characteristically from the USA or Europe. Such arrangements are especially prevalent in those Caribbean nations where foreign currency is readily accessible for premium remittances.

Given that small property owner segments in the less advantaged sectors do not partake of insurance coverage, it is interesting to note that the Barbados government recently created the Poverty Alleviation Fund under the responsibility of the Minister of Social Transformation. In concept this could perhaps serve as an agency for simple building structure vulnerability reduction measures being implemented (possibly with hands-on assistance from Defence Force members). To some small dwelling and business property owners, traditional insurance is a little understood or respected mechanism. For these sectors, a non-traditional approach via the property tax mechanism could offer a worthwhile level of pre-event risk funding. Simultaneously, governments as a matter of ongoing policy should undertake public education programmes and publicity on risk management and the prudent use of insurance for protection.

A modest property tax surcharge could fund a flat amount for storm damage essential repair costs (possibly geared to property square footage). Access to the programme could be made conditional on property owners' compliance with elemental storm protection measures (for example roof straps), the materials for which could be provided free. A side effect would be that the arrangement, being independent of the catastrophe insurance market mechanism, would not disturb the available market levels of insurance or reinsurance capacity. As illustrated in the subsequent

sections of this paper, a sub-regional insurance pool might accumulate surplus capital out of which periodic limited 'dividends' could be paid out to support complementary financing for repair costs in the above mentioned sectors which are generally 'uninsurable' from the industry's standpoint.

This concept would appear to address directly, at modest cost, the goals of actualising vulnerability reduction measures and providing pre-event funding for essential repairs. Accomplishments towards these combined goals would diminish both the direct and indirect socioeconomic consequences of storm events. Such a programme could also be facilitated by a standby credit arrangement from an international funding agency, as already exists for the OECS countries at country level.[1]

Competitiveness of the industry

Most of the indigenous/local insurance companies were founded some 30 years ago, having previously operated as general agencies or branches of foreign (mainly UK) insurers. For the most part, local companies continue today as insurance units of trading and financial companies whose profit strategies centre on their role as agents for a wide range of products and services.

Three primary classes of insurer transact catastrophe insurance (as opposed to reinsurance) in the Caribbean:

1. **Locally registered insurance companies** regulated by the insurance supervisors of each nation.
2. **Regional insurance companies** registered in each home country but also conducting business in other Caribbean countries in which they operate.
3. **'Foreign' insurance companies** – so called because they are regulated and based outside the Caribbean, mainly in Europe and the USA.

It is estimated that the first two have the large preponderance of small and medium-sized dwelling and commercial business; while the latter has a significant and growing share of the larger commercial risks segment. Of the 'foreign' companies, several are exempted from most local regulation and taxation. Bermuda and Barbados are the largest centres for exempt companies.

Developments within the WTO and CARICOM trade liberalisation gen-

[1]OECS Emergency Recovery and Disaster Management Programme, funded by IBRD/IDA to undertake mitigation investments, post-emergency reconstruction investments and institutional disaster preparedness.

erally are progressively blurring the original demarcations between the three primary categories of insurer. Today, foreign companies have little practical difficulty in accessing the business they want in nations with reasonable access to strong currencies. They can either issue a 'foreign' policy (for example from the USA, Canada or the UK), or they can make a 'fronting' arrangement with a local company under which almost all the risk bearing is reinsured back. The selection of method employed generally depends on the relative ease and cost of purchasing foreign currency for premium payment.

Foreign companies are adept at merging Caribbean risks into multi-national package programmes especially for Caribbean subsidiary operations of multi-national corporations. Foreign companies tailor-make policy coverage and insuring large structures often using insurance risk-management techniques seldom encountered in local Caribbean markets. The larger local companies realise the need to compete on technique as well as price but can be deterred from such initiatives because of the relative rigidity of their reinsurance programmes which are primarily geared to run-of-the mill heterogeneous small and medium-sized risks. Most local companies' strategies are primarily geared to generating the normally higher margin reinsurance commission levels available from their conventional insuring practices. Foreign insurers, on the other hand, primarily seek profit from their individual risk underwriting expertise, acknowledging that expense elements of the premium need to always be kept competitively low.

The practice of insurance in the Caribbean is advanced in comparison to most emerging economies and this probably reflects the recognised exposure to natural hazards, as well as the growth of the tourism industry which demands insurance services to protect its capital investments. However, the local insurance industry, while effective in transferring risks, requires improvements in risk underwriting and the ensuing ability to discriminate between risk ratings of property risks to encourage pre-insurance loss mitigation measures. These will, in the long run, reduce the costs of insurance for both recipients and suppliers. The next section of this paper discusses methods whereby local insurers, policy holders, property owners and governments can significantly lower the overall price of insurance, and therefore increase competitiveness through physical vulnerability reduction measures. Such actions should represent a basic underlying strategy for reducing risk in disaster-prone regions.

Mitigation, self-insurance and vulnerability reduction measures

The natural risk exposure of Caribbean economies implies that even while exploiting the insurance mechanism in the most cost-effective manner, this will still result in higher relative premiums compared to other regions in the world. Besides the advantages of risk pooling (discussed below) which allows diversification of risk and better leverages the available capital, another major source of both premium and risk reduction consists of physical measures to reduce the structural vulnerability of properties and critical assets. Very modest investments in mitigation, such as roof straps to protect against hurricane force winds, can reduce loss exposure substantially, sometimes by as much as 50 per cent. Such measures need to be accompanied by regulatory enforcement of building codes as well as insurance-based incentives which can be achieved through the standardisation of data on construction code ratings and property risk characteristics. These resources can also be harnessed to develop publicly sponsored quasi-insurance schemes for vulnerable low income communities, in order to instill a framework and awareness about the costs and benefits of both physical and financial risk management tools.

While the insurance mechanism can be considered a strategic financial instrument for transferring risks which are too intense to bear by individual property holders, both public and private sector, the insurance tool should be used only once all other 'manageable' mitigation measures have been exhausted. As confirmed in the section below, the manageable part of the risk, which can be reduced via physical measures, has a great potential for reducing the underlying structural risk to physical assets, with the ensuing effect of dramatically reducing the potential 'loss value' of properties at risk. This, in turn, has the benefit of commanding lower premiums for such exposures for whose residual non-manageable risks should be transferred via the insurance market. The specifics of such measures are discussed in this section, as well as the hazard information requirements needed to establish the underlying data for classifying insurance risks properly. In addition, these concepts are also applied to managing risks for low-income communities where a policy of explicit but limited government insurance can be coupled with mitigation activities that begin 'transferring' such risks away from the public sector.

The mitigation of catastrophe loss (direct loss, ensuing reconstruction debt and other adverse consequences) includes the following strategies which can reduce structural and financial vulnerability under pooled or non-pooled insurance arrangements alike:

a. *Vulnerability reduction physical measures;*

b. *Use of building codes and other regulatory measures;*

c. *Generation and availability of information on hazards, vulnerability and risk;*

d. *The contributions of the insurance industry.*

Vulnerability reduction measures are broadly accepted as the highest-impact mechanisms to reduce catastrophe loss as they operate before the event to neutralise the impact of physical forces. The insurance mechanism, on the other hand, is limited to providing monetary compensation after loss has been incurred. Furthermore, only part of the insurance premium dollar is available to compensate losses as over half is customarily consumed by operating expenses and taxes. The dollar expended on vulnerability reduction (for example roof strap retrofitting) retains a very lasting physical protection value.

Empirical data showing vulnerability reduction cost/benefit yield potential are not maintained. However, regional civil engineering experts estimate that, on average, expending 1 per cent of a structure's value on vulnerability reduction measures can characteristically reduce the probable maximum loss (PML)[1] from windstorm (CAT III, 120 mph+) by at least a third. For example, a $100,000 dwelling's pre-retrofitting PML of $10,000 would become $3,000 after retrofitting. Such retrofitting is customarily focused on roofs, openings and claddings, and can often be effectively installed by the property owner. Similarly, it was reported from Trinidad that relatively simple measures (tying walls to foundations, walls to walls, walls to roof supports, and roof supports to roof sheeting), provide effective structural cohesion that can withstand high winds and flash flooding.

Past hurricanes illustrate all too well the cost of indifference to vulnerability reduction measures. Nearly a third of the 1988 Jamaica Hurricane Gilbert direct losses (totalling $956 million) were primarily caused by the loss of roofs from dwellings, most of which would have been prevented by effective and inexpensive roof strapping. Hurricane Andrew in 1992 severely ravaged dwellings in Florida as a result of construction code violations, shoddy workmanship and inadequate inspection enforcement.

[1]PML differs from EPL in that PML reflects an estimated 'maximum' loss from an event with a specified intensity and estimated probability, and which is used as a 'reference' benchmark to calculate insurance capital requirements and potential losses within a reasonable time frame. EPL, on the other hand, reflects the mean expected loss over a range of events and frequencies. In this regard, PML can be seen as identifying a 'tail' on the loss distribution function which is considered the reference point at which insurers and property owners may consider the need for undertaking preventive risk management actions and holding sufficient capital reserves to cover such an eventuality.

International aid and development funding agencies, besides sharing consternation at delays, disruptions and increased costs, have the strong view that wisely planned hazard and vulnerability reduction efforts and funding before a catastrophe pay excellent dividends in reducing economic impacts. Mitigation expenditures are a very small fraction of the funds spent on reconstruction in the aftermath of catastrophes.

The use of building codes and other regulatory measures capable of encouraging mitigation can be divided into two categories:

Non-structural:	Identification of hazard-prone areas and limitations on their use Land-use allocation and control Incentives
Structural:	Use of building codes and materials specifications Retrofitting existing structures Use of protective devices.

Non-structural/regulatory/risk rating measures

Non-structural measures are in use in the Caribbean but on a very limited basis. Hazard mapping, although resource and time intensive, has to be considered the fundamental underpinning of any meaningful strategy for catastrophe mitigation. Hazard mapping in particular has critical application to a rational catastrophe insurance market mechanism, and hence to rational reinsurance pooling arrangements. To set the base for providing reliable planning information, governments of the Caribbean should consider as a priority the mapping of hazard locations (and appropriate zoning regulations) throughout each country, and the inventorying of all properties and physical assets (including building code classifications) to be reflected on such maps and information databases. Such measures are not only useful for hazard planning purposes, but also provide the actuarial basis for localised insurance pricing of assets in all zones.

The establishment of comprehensive 'risk data' information bases also permits the insurance industry to participate in loss mitigation incentives by providing tools to better understand and price local risks. Such information allows detailed characteristics, such as building code ratings, to be taken into account when determining potential loss costs to be used in rating insurance coverage for individual properties. This results not only in fairer prices for insurance but also provides an economic incentive for communities to strengthen their building codes and enforcement.

Insurers can take a number of steps to help promote investment in vulnerability mitigation measures and to reduce potential loss profiles on

underwritten risks. For this purpose, industry service functions could be established under a specialised industry sponsored office (similar to the Insurance Services Office in the USA), in order to assign 'grades' to communities based on the quality of their building codes and their enforcement. For this, a grading schedule reflecting building code enforcement can be established for qualifying communities which may be eligible for premium discounts. Under such a programme, grades would be assigned to local communities based on structural factors as well as public protection services (for example, disaster preparedness, fire fighting capability, etc.) which are available. Loss cost estimation and associated premium levels should, in addition to the above factors, also be based on the characteristics of individual properties, including location and risk exposure in accordance with the hazard mapping information discussed above.

Structural measures

Structural measures have also made only limited headway in the Caribbean. The Caribbean Unified Building Code (CUBIC) has now progressed into useable codes in several nations but, as was recently observed, these improved codes lack any effective enforcement practices. Limited progress on retrofitting can be attributed primarily to the lack of incentives and concerted leadership in the promotion of benefit features and practices.

A fee-based approach which might result in more effective enforcement actions would be to set up a Bureau de Controle type firm at the regional level, with the responsibility to inspect building during the construction cycle. While political decisions would need to be made to permit such an entity to operate as a regional private concern with fees charged to either property owners or their financiers, the benefits would be direct given the economic incentives for such a firm to ensure that the code was complied with. Such entities could also enter into cost sharing arrangements with banks and insurance companies as well as property owners, to share the costs more broadly.

For structural measures, information exists on demonstrably worthwhile mitigation technologies. However, a major exception relates to catastrophe event return period probabilities which are essential in determining the cost/benefit trade offs of different types of mitigation actions. For this, historical patterns are limited to a few centuries; also changing and/or unmeasured patterns (for example the Greenhouse effect and El Niño) exacerbate the challenges of forecasting frequency probabilities.

However, even the extensive information available is too seldom articulated in layman language of practical use by those who should derive the most implementation benefits. These include development decision-

makers as well as professionals and artisans in the construction (and retrofitting) fields. Recommended reading includes 'Managing Natural Hazards to Reduce Loss' in *Disasters, Planning and Development: Managing Natural Hazards to Reduce Loss*, OAS, 1990.

Strategies linked to insurance usage

For non-structural technologies, clear and durable on-the-ground markers could disseminate valuable information. Such could display floodwater and wave surge expected levels. Structural information techniques could include sample skeleton structures (perhaps mobile) which would display practical retrofitting installations. More important than anything else, however, is the need for government, civic and private (including insurance companies) to grasp initiatives for mitigation implementation.

There is no empirical data on self-insurance usage. Public utilities (CARILEC and Barbados L&P) have such programmes which include standby credit mechanisms to provide liquidity during build-up of the self-insurance funding amounts. An argument can be made for tax deductibility of such dedicated funding, as the considerations are analogous to the tax deductibility allowed insurance companies for essentially the same purposes.

So-called 'Captive' insurance company arrangements contain self-insurance features. In these, industry affinity groups, for example the Caribbean Hotels Association, enter into insurance purchasing combinations. They can include the joint capitalisation of an offshore captive insurance company, which could have the function of carrying the 'claims deductible' exposure of shareholder property owners in the manner described earlier. This is an example of risk and reinsurance pooling.

In the wider socioeconomic context, the broad-brush practices used for risk rating serve to discourage building structure vulnerability reduction measures. Outside the Caribbean such measures are very prevalent and of proven effectiveness to mitigate catastrophe destruction and disruption. Insurance companies, with the full concurrence of their reinsurers, offer significant premium rate differentials conditioned on the specific location and physical risk characteristics of properties insured.

Empirical data showing the vulnerability reduction (VR) cost/benefit yield potential is not standardised. However, a respected ESC civil engineering firm (CEP Engineering Ltd.) has compiled the following table to summarise estimates of the VR measure expenditures required to reduce by 50 per cent the Probable Maximum Loss (PML) from a category 3 (120 mph+) hurricane:

Table 7. Characteristic Expenditure on VR Measures Required to Reduce CAT III Hurricane PML by 50 per cent (expressed as percentage of overall building value)

	New Construction	Retrofitting
Construction Categories:		
	Dwellings	
A. Reinforced concrete and masonry	1.2	1.8
B. Lightweight roof and masonry walls	1.5	2.2
C. All lightweight construction	2.2	3.4
	Commercial/industrial/public	
A. Reinforced concrete and masonry	1.3	2.0
B. Lightweight roof and masonry walls	1.7	2.8
C. Steel structure and lightweight cladding	2.8	3.8

As an example, a $1,000,000 value Class B commercial structure, without deliberate VR measures, could typically be assessed at a 10 per cent ($100,000) PML for a category 3 hurricane.

Estimates suggest that VR measures costing $17,000 (new) or $28,000 (retrofitted) would reduce the PML by 50per cent to $50,000.

Hurricane vulnerability reduction (VR) measures for structures

Cost/benefit yield estimates

The methodology for determining VR cost estimates to yield a 50 per cent reduction in Probable Maximum Loss (PML) from a category 3 hurricane (Saffir-Simpson scale, above 120mph wind speed) is illustrated below. This category storm is generally recognised by insurance markets for damage exposure estimations.

The approach used[1] was first to express the category 3 maximum wind speed as 1 minute pounds per square foot pressure. As the mean value, the figure of 2.25 per cent was employed, representing the estimate of the incremental VR measures' cost for a new dwelling structure. This figure was deduced from 20 years of professional experience on both design and retrofitting consulting, as well as many on-the-spot surveys of post-hurricane damage scenarios. Original estimates were compared and adjusted using other information sources, including Munich Re's published materials. In particular findings showed:

[1]*Source:* CEP Engineering, T. Gibbs, Barbados.

1. Not unexpectedly, VR retrofitting proves more expensive than VR measures implemented at the time of original construction.

2. Caribbean industrial purpose structures, as opposed to regular commercial structures, customarily have the least storm resistant designs and materials.

3. From insurers' observations, storm damage to contents characteristically runs at twice the damage cost to the respective structures.

Following that, the 2.25 per cent mean was scaled to VR cost estimates for the several construction and occupancy use classes. The methodology and judgement incorporates reasonable confidence on the potential of VR measures, at the indicated cost levels, being able to reduce hurricane damage (and PMLs) by 50 per cent. This confidence is founded on post-hurricane surveying and information from clients who have adopted similar VR measure recommendations.

It should be made clear that estimates shown in the table are necessarily broad averages for the classes shown (see Table 8). Individual structures have individual structural, exposure and location characteristics which can vary their VR performance from the averages displayed.

The illustration shows that implementation of VR measures, after a CAT premium rate reduction of 25 per cent (0.60 to 0.45), has served to decrease the Risk/Premium ratio ('b') from 13.3 to 6.7 – an improvement of almost 50 per cent.

Clearly, the above measures, if disseminated and implemented across the capital stock assets of Caribbean countries, would not only dramatically reduce post-disaster economic strain on the government and on private individuals, but would also permit much broader usage of the insurance mechanism as a less costly policy and risk management tool. While the analysis of pooling and risk transfer in the following sections of this paper is based on existing premiums based on current, but limited, VR practices, the incorporation of such VR practices on a broad scale could potentially halve the price of insurance protection and thus broaden its usage on a much wider scale. One sector, however, which requires special attention and which, to date, is not equipped to afford insurance or be insurable, is the low-income communities which remain the responsibility of regional governments in terms of disaster assistance and recovery.

Table 8. Illustration of Impact of Hurricane Vulnerability Reduction (VR) Measures on the Risk Premium/Risk Amount Ratio

Assumptions:

1. Building Structure Hurricane PML:
   Before VR retrofitting 10%
   After VR retrofitting 5%
2. Policy claim deductible is 2% x sum insured
3. Sum insured is $500,000
4. Premium rates (%) are:

	Full rate	Catastrophe (CAT) element
Without VR measures	1.00	0.60
With VR measures	0.75	0.45

	Risk premium/risk amount ratios	
	Before VR measures	***After VR measures***
Sum insured ($)	500,000	500,000
PML	10%	5%
PML ($)	50,000	25,000
Claim Deductible 2% ($)	10,000	10,000
Net Insurance Liability ($)	40,000	15,000
CAT premium rate	0.60%	0.45%
CAT Premium ($)	3,000	2,250
Ratios:		
a. Risk premium/risk amount	7.50% (3,000/40,000)	15.0% (2,250/15,000)
b. 1/a	13.3	6.7%

Developing insurance for low-income communities

One of the primary challenges for governments in disaster-prone regions is the protection of low-income communities and the development of incentives for community participation in risk management measures. The properties, particularly the housing stock of low income communities, are generally fragile, and this fact makes them difficult to insure even if affordability was not an issue. However, affordability *is* an issue, and therefore governments have the dual challenge of promoting structural measures to reduce the vulnerability of low-income housing assets, and improving the economic welfare of such communities to begin to allow a phased-in process of risk management using the insurance mechanism.

Due to the above factors, it is imperative that governments in disaster-prone countries, such as those in the Caribbean, exploit to the fullest extent the range of tools available for hazard mitigation in order to reduce

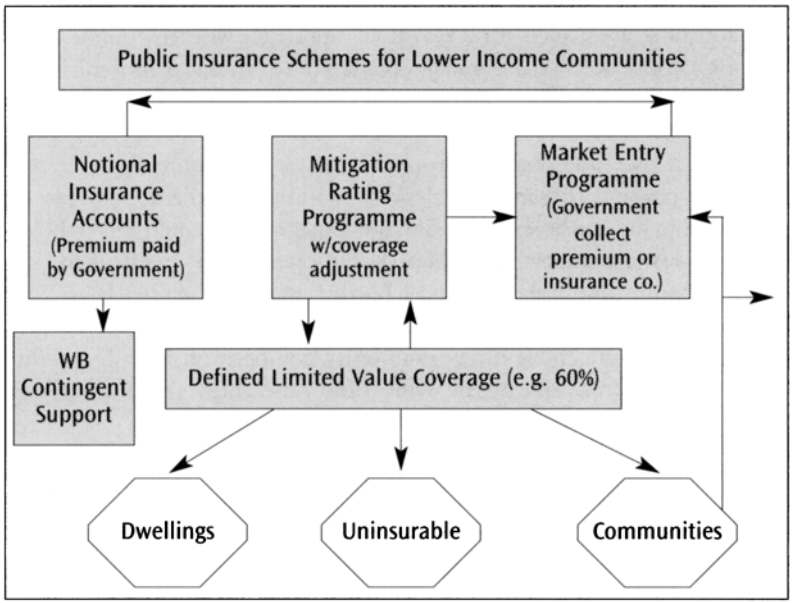
exposures of the dwellings of low-income communities, while at the same time making transparent what the government risk liability consists of, and what risk liabilities should be borne by the communities themselves. This sort of strategy calls for a two-track approach whereby public funds for 'mitigation works' are made available to these communities in exchange for an explicit public insurance policy which is limited in its coverage, but which allows low-income communities to be adequately protected if they follow the appropriate practices of vulnerability reduction. Non-participating individuals or communities, while not completely exempt from aid in the event of a major catastrophe, would nevertheless receive a lower priority than those home owners who had taken proactive measures in mitigation, and who thus would be explicitly covered for insurance purposes – up to a specified limit – by the government. Such a system would engender inter-community competition in vulnerability reduction measures, and at the same time raise the level of awareness regarding the nature of insurance policies and risk sharing.

It should be noted that the implementation of a public insurance scheme, such as the one outlined below, is a medium- to long-term endeavour which requires a process not only of self-management of risks, but also an educational process to ensure that affected communities are well versed in the risk framework (both physical and regulatory) in which they operate. Initial financing for the required mitigation measures under such a scheme can be provided via public and international donor funds, as well as through potential savings generated through insurance pooling mechanisms, using alternative risk transfer instruments as described below. In the latter case, an explicit 'social compact' with the insurance industry would be required for such contributions to be viable, although such a compact would also help to promote the practice and understanding of insurance in low-income communities for eventual usage – income levels and structural standards permitting.

Figure 9 shows one potential financial structure for a public insurance fund which would combine the aspects of mitigation with education and promotion of insurance.

The scheme relies on a three-phase approach which begins with the essential element of mitigation and incentives for vulnerability reduction. As mentioned earlier, the financing for such a phase will likely require public contributions in terms of funding for materials and, in some cases, skilled technicians. However, the labour cost, for the purposes of risk sharing, would be borne by the communities themselves, as this would be necessary to assure buy-in of the programme with the subsequent incentives for obtaining explicit government insurance protection.

Figure 9. Outline of a Public Insurance Scheme for the Protection of Low-income Communities



The government insurance programme would attempt to defineexplicitly the levels of loss covered by the public sector in the event of a major catastrophe. In this regard, it can be compared to central banking/deposit insurance policy in the financial sector, whereby moral hazard is reduced by having the government provide some insurance (in that case to depositors), while limiting the upside loss amounts. In the case of catastrophe insurance, the same principle would apply, i.e. following the verification of structural mitigation measures undertaken by such communities (which would reduce asset risk exposure), the government would provide explicit coverage in an amount that for example, could reach 40–60 per cent of the property value if this was lost on account of a natural disaster. To demonstrate the seriousness of the policy, the government would issue insurance policies to all such home owners or dwellers showing the level of coverage and the notional actuarially fair premium to be fully subsidised by the government at the outset.

The initial notional premium would therefore constitute no charge to the policy holder. However, the government would make it explicit from an accounting standpoint in order to disseminate the nature and cost of such an insurance policy. The government would also specify in the policy statement what the structural rating grade of the property was, since that

would provide an input into the notional premium price paid by the government. Of course, the government would not be actually paying a premium unless it deemed it prudent to build up reserves for such an event (an option which could be viable in some jurisdictions), but it would hold the liability to pay for damages in the event of a disaster.

The rating category shown on the policy holder's statement would also be reviewed periodically based on progress in the mitigation programmes undertaken, and adjusted accordingly. For those properties undertaking significant mitigation measures, the government could safely increase the coverage for the same notional premium (or reduce the premium for the same coverage), an adjustment which would be budget neutral from its standpoint, but which would provide incentive signals to low-income dwellers to continue undertaking vulnerability reduction measures if they wish to partake of increased government insurance protection. Eventually, as income levels increased in such communities or parts thereof, the government could begin phasing in cost recoveries on its notional premiums so that property owners themselves began paying for some of their insurance. At this stage, property owners would also have the option of using insurance from the private markets if this was deemed to be on more favourable terms.

A key question which might be raised about such a scheme relates to the possible moral hazards – that is, if a given property holder decided to do nothing at all, would he/she naturally not count on government aid anyway, in the event of a natural disaster? The response to this is 'yes', but a very qualified 'yes'. In other words, the government would not be able to completely ignore a low-income property dweller following a disaster, simply because he/she had not signed up for the mitigation programme and the public insurance policy. However, the government could prioritise post-disaster reconstruction and give preference to those communities who had undertaken pro-active measures and whose 'insurance policies' would therefore be honoured in a timely manner. This measure in itself, if made explicit by the government, could encourage inter-community competition to sign up for the mitigation/insurance programme in order to receive funding first following a disaster.

While this system does not solve all of the issues of free riders and moral hazards, it does initiate a process of education about risk management and insurance which in the long run could provide its own societal incentives for communities to reduce their passive reliance on government help, particularly if such help, and its timeliness, was prioritised according to risk-sharing measures undertaken *a priori* by other communities.

Mitigation and insurance as simultaneous and sequential strategies

This paper has discussed the powerful tool of mitigation as a core strategy in a comprehensive risk management programme. It has shown how mitigation measures and insurance policies go hand-in-hand in the process of risk management. Nevertheless, once all mitigation measures have been exhausted, countries exposed to natural disasters still require mechanisms to 'hedge' the remaining risks which constitute economic or financial risks that would be difficult to avoid even by undertaking the most comprehensive vulnerability reduction measures. Such hedging mechanisms, which are embodied in established insurance practice, can be structured in different configurations for the purpose of managing and transferring risk. The following section of the paper describes how the insurance sector in the Caribbean has structured its insurance arrangements with the international market for this purpose. It examines the implications of these arrangements in terms of managing the financial impacts of potential natural catastrophes, including the coverage benefits and premium costs of various strategies.

Financial structure of reinsurance contracts in the ESC

The transfer of risk for potential catastrophic liabilities constitutes a key financial strategy in the economic management of disaster-prone countries. Risk transfer in the insurance sector generally takes the form of reinsurance contracts taken by local insurers with international (re)insurers who can better absorb large risks. This section examines the current practice and structure of reinsurance arrangements used in the Caribbean and the alternative approaches used for structuring reinsurance contracts. In particular, the modalities of proportional reinsurance treaties versus excess-of-loss treaties, or their combination, are explored to show the advantages and limitations of each. Such financial arrangements set the basis for examining the range of alternative risk transfer instruments which can be deployed under pooled catastrophe funds to manage large loss risks effectively. The structure of these contracts point to the development of future strategies which can deploy a more optimal balance between capital for domestic risk retention and capital for financing the cost of risk transfer.

The section starts by setting out the components of '*proportional*' or '*quota share*' reinsurance arrangements (Table 9). These are by far the most prevalent arrangements used by Caribbean insurance companies for catastrophe reinsurance purposes. Also displayed is a simplified income statement using the described components (Table 10). There follows a discussion

of excess-of-loss (XL) reinsurance with an explanation of why this mechanism, in wide use elsewhere, is not favoured in the Caribbean. The section continues with a discussion of some fundamentals of reinsurance portfolio risk management in the context of Caribbean catastrophe insurance.

Table 9. Sample Caribbean Insurance Company's Property Insurance Portfolio and Reinsurance Arrangements

Assumptions:			**$ million**
1. Insurer's total property (fire etc. and catastrophe perils) policy sums insured, i.e. total gross exposure liabilities			100.00
2. Hurricane peril Estimated Expected Loss (EPL) assessed at average 20 per cent x sums insured = Gross EPL			20.00
3. Average policy claims deductible is 2% times sums insured			2.00
4. Net of deductible aggregate portfolio catastrophe Gross EPL			18.00
5. Average all peril policy premium rate is 0.8% times sums insured – producing portfolio premiums (Original Gross Premium (OGP))			0.80
6. Gross premium rate (5) is comprised of:			
	Non-catastrophe element (fire perils, etc.)		0.32%
	Catastrophe peril element		0.48%
		Total	0.80%
7. Company's direct (before reinsurance) administrative and acquisition expense ratio for property insurance is 30% times OGP (# 5).			
8. Reinsurers allow reinsurance commission rates of:			
	On non-catastrophe premiums ceded	32.5%	
	On catastrophe premiums ceded	25.0%	
	Average reinsurance commission rate	28.0%	
9. Proportional reinsurance (i.e. not Excess of Loss) across whole portfolio is structured as 80% reinsured and 20% retained.			
10. Respective Catastrophe Liabilities of primary insurer and reinsurers are therefore allocated as:			

	Primary Insurer	**Reinsurers**	**Total**
Gross sums insured	$20.00m	$80.00m	$100.00m
Catastrophe aggregate EPL (net of deductibles)	$3.60m	$14.40m	$18.00m

11. Gross Claims are:			
	Non-catastrophe		$250,000
	Catastrophe – gross	$ 500,000	
	Less deductibles	$100,000	= $400,000
			$650,000
12. Investment Income is assumed at 10% of net premium + reinsurance commissions + carry over liquid investment balances			= $44,000

Table 10. Simplified Income Statement for Primary (reinsured) Insurance Company Property Portfolio

		Income	Expense	Net balance
Assumption	***Entries***			
1	Gross premiums received	800,000		
7	Direct expenses		240,000	
9	80% Reinsurance premium		640,000	
8	28% Reinsurance commission	179,200		
12	Investment income	44,000		143,200
11	Incurred eligible claims		650,000	
9	Claims recoveries from reinsurers (80%)	520,000		13,200

The above example displays the fundamental financial parameters in most common use in the Caribbean for risk pooling utilising the *proportional* (*quota share*) reinsurance mechanism.

XL (Excess of Loss) Reinsurance employed in Conjunction with Proportional Reinsurance

Caribbean insurers with proportional reinsurance contracts customarily purchase an 'inner' layer of XL reinsurance to protect their *catastrophe peril only* net retention. This XL reinsurance covers approximately the upper 20 per cent layer of the retained (co-insured) risk under the main proportional reinsurance contract. Reinsurance costs for proportional covers are essentially a function of the gross premium rates and the reinsurance commission rates allowed as related to the direct administrative costs (assumption 7 in Table 10) of the insurance company. For the sake of simplicity, the inner XL catastrophe reinsurance cover is not shown.

An insurance company, to select the threshold point for an inner XL cover, will primarily consider its net worth strength, as well as the additional cost of the XL cover. As an example using the sample shown above (Table 10), the company had (net of reinsurance) property insurance premiums of $160,000 (20 per cent of gross), which could suggest the company having notional capital for allocation to property business of some $40,000 (a 4:1 premium/capital ratio). The company's remaining capital and any free reserves (retained profits, etc.) could also be considered. Conceivably this company could have selected a $120,000 threshold, above which it would use an XL catastrophe reinsurance cover which would thus allow ceding 25 per cent of the retained risk.

In the above example, a $120,000 threshold retention would have allowed

invoking $10,000 in excess of loss cover (gross claims of $650,000 times 20 per cent = $130,000 retained claims, or $10,000 above the XL reinsurance attachment point).

XL reinsurance employed as a principal mechanism for catastrophe reinsurance

The ***Excess of Loss*** (XL) reinsurance mechanism is widely used outside the Caribbean (by relatively larger insurers) for their catastrophe reinsurance needs. Under XL structures the reinsurers' liabilities are triggered above a given retention amount and customarily for 100 per cent of aggregated claims above the retention amount. The XL reinsurance price is normally expressed as a 'rate on line' signifying the dollar reinsurance premium as a percentage of reinsured loss limit. This rate on line is assessed by judging the extent to which a reinsured portfolio's aggregate EPL would penetrate the reinsured layer's limits. For example, a reinsurance rate on line of 30 per cent ($300,000 per million of limit) would suggest a fully penetrated (exposed) layer and an approximate three-year notional payback period, i.e. a high frequency and severity probability to reinsurers. As the reinsured limit layers get higher and further removed from anticipated full exposure penetration, the rates on line diminish and the pay back periods increase. Reinsurance commission is not a feature of XL covers.

The accurate and reasonable pricing of XL reinsurance calls for meticulous assessment of a primary portfolio's aggregate catastrophe EPL liabilities. Short of having full information, a reinsurer will price to cover the 'doubt' factor and resulting quotations will often deter prospective primary company customers. Primary companies can on occasion be dazzled by the front end cash flow benefits of XL reinsurance without prudently assessing the potential back end liabilities represented by having full liability for the retention limit – a liability actualised by a catastrophe event. XL reinsurance is generally considered as more of a 'bet' than proportional reinsurance under which the respective claims liabilities between reinsured and reinsurer are clearly apportioned from the lowest claims level to the highest. Thinly capitalised primary companies as seen in the Caribbean are understandably averse to full XL reinsurance.

Second Event Reinsurance (Reinstatement Contracts). This is primarily a feature of XL reinsurance contracts and refers to the basic premise that the reinsured limits are available once during a single contract period (normally annual). Once reinsured limits are 'consumed' by a catastrophe event or other claims, the limits require reinstating for 'second (or subsequent) event' via payment of additional reinsurance premium. Most primary companies in the ESC purchase second event coverage reinstate-

ment as included in their original XL contract negotiations, as this is generally both cheaper and more likely to be available than having to face reinsurers' quotations in the aftermath of a major claims event. Customarily, 'second event' protection is not an issue under proportional reinsurance contracts where reinsurers contract to reinsure a portfolio's claims for the full contract period.

Reinsurance portfolio risk management considerations

This report has discussed the proportional catastrophe reinsurance mechanism from the standpoint of the primary insurer. From the standpoint of the reinsurer, the parameters are essentially the converse, with the reinsurer entering reinsurance premiums net of commissions, any claims incurred, and any income derivable from invested funds – primarily unexpired premium reserves or reserves for reported, but yet to be paid, claims. However, having a portfolio of reinsurance contracts allows the reinsurer to adopt risk-management practices analogous to those practiced by banks on loan portfolios. To obtain an optimum match between risk and return, the reinsurer can reinsure further ('retrocede') to other reinsurers (perhaps with reciprocity), as well as consider securitisation to contain liability. However, throughout the chain of risk bearing (from policy issuing insurer, to reinsurer, to retrocession carrier, to securitisation), the key parameter is the relationship, or the ratio of Risk Premium to Risk Amount.

In the context of catastrophe insurance, the value of 'Risk Amount' is comprised of:

1. Severity element – the Probable Maximum Loss (PML); and
2. Frequency element – the probability of a catastrophe event.

For the severity element, proven technologies exist to obtain reasonably accurate quantification. These require detailed hazard mapping and awareness of distinctive building structure methods and materials. The frequency element assessment has yet to attain a similar stature of reliable precision. Actuarial approaches to catastrophe event return periods can be reasonably viewed as volatile for reinsurers' short term practical purposes. Furthermore, the 'Greenhouse' and El Niño theories suggest that historic natural disaster frequency patterns are unlikely to be repeated. Thus the forecasting of catastrophe frequencies has yet to mature to a reliable level in calculable risk probability terms.

These factors – severity and frequency – underpin the catastrophe reinsurance markets' cycles. In effect, Risk Premium levels prove almost invariably either too high or too low, and only fortuitously are rarely in equilibrium to the Risk Amount exposure.

In the Caribbean, the existing severity (PML) assessment techniques are very broad brush. Characteristically, a portfolio's aggregate PML is established by reinsurers' view of hurricane storm tracks and impact potentials. Wide geographic areas containing several nations are customarily swept into a single PML category, without regard for the topographical features and structure resistance distinctions propounded by regional and international experts.

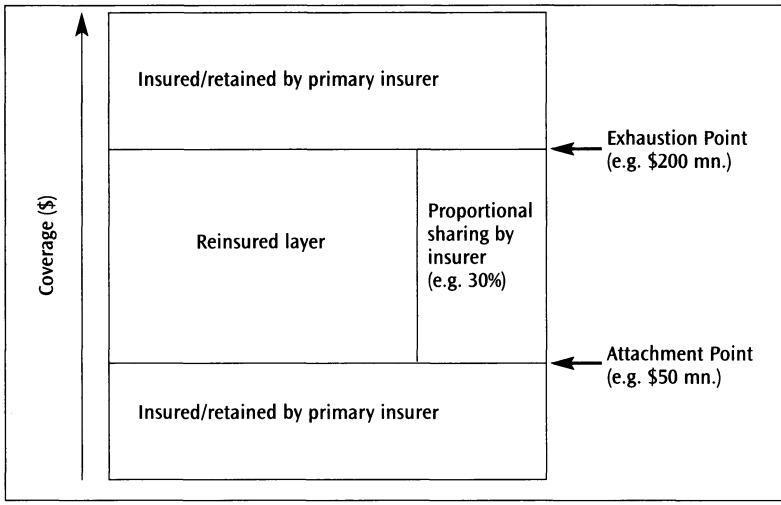
Furthermore, Caribbean insurers' catastrophe premium rates are also very broad brush without discrimination to reflect topographical hazard and structure resistance distinctions. It can, therefore, be logically held that the poorer risk quality properties are subsidised in premium rate terms by the better risk quality properties. These broad brush reinsurance and policy rating practices may have produced administrative simplicity but cannot claim effectiveness as regards accuracy in assessing the Risk Premium/Risk Amount ratio.

Capital market alternatives, whether they are in the form of securities, such as bonds, or in the form of loans, can potentially reduce, or at least stabilise, the prices of coverage. The reasons are twofold: the capital markets comprise approximately $42 trillion in assets currently, compared with insurance industry capital estimated at $0.9 trillion and, secondly, investors have shown portfolio preferences in purchasing catastrophe bonds, given that their yields are both higher than the market and uncorrelated with global financial market movement, thus providing a diversifying hedge. Although such bonds have 'default' characteristics, in the sense that if a disaster strikes the bonds are liable to lose interest and principal, the probability of such events is generally lower than similarly rated sovereign bonds which have higher probabilities of country default risk.

Before considering the cost effectiveness in the pricing of alternative risk transfer instruments such as catastrophe bonds or contingent credit lines, an illustration of the catastrophe insurance coverages and their structures is shown (see Figure 10).

Figure 10 shows a reinsurance structure which combines the elements of proportional treaty coverage (used widely in the ESC) and excess of loss (XL) covers. As mentioned above, local insurance companies in the ESC traditionally use proportional treaties (also known as quota share treaties) to share risks with reinsurers. Figure 10 implies that after the initial retention of risk by the primary local insurer at the lower levels, the primary insurer then cedes about 70 per cent of the coverage (and premiums) to the international reinsurer. For any claim based on damage, the insurer would thus pay 30 per cent and the reinsurer 70 per cent (past the initial retention level and before the exhaustion point).

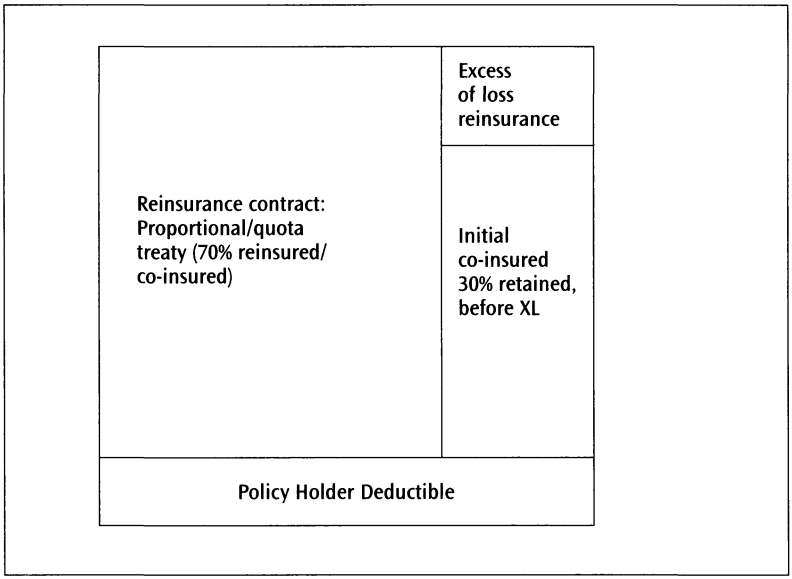
Figure 10. Combined Proportional (quota share) Treaty with Catastrophe Excess of Loss (XL) Reinsurance Structure



Generally in the East Caribbean, the proportional treaties do not have upper limits as in Figure 10, although more recently proportional reinsurers have begun limiting their upper layer liability. As discussed above, local companies in the ESC have begun using excess of loss (XL) cover on what they retain, i.e. on the 30 per cent portion in this case. As a matter of practice, however, XL cover as a form of insurance/reinsurance is not based on proportion of total claims submitted but rather on a specified level of quantified losses (independent of the claim amount). The XL reinsurance cover begins paying after the 'attachment point' and stops paying if losses exceed the 'exhaustion point' or cumulative limit.

The above structure combines both methods in that claims are paid by the reinsurer based on attachment and exhaustion limits, though within those limits, the primary reinsurer also shares a small proportion of the risks, or what is also known as 'coinsurance'. These structures provide strong incentives for all parties to be concerned about loss reduction measures and to avoid adverse selection problems. However, as is discussed later, the ESC catastrophe reinsurance structure is different from the above model in that an even greater proportion of risk is ceded or transferred (see Fig. 11). While this makes sense from a macroeconomic perspective, it can lead to disincentives for loss reduction measures if very little risk is retained/managed, and because of the high dependence on reinsurance, it leads to more potential volatility in the pricing of catastrophe insurance which is subject to the global market supply availability.

Figure 11. Typical Caribbean Reinsurance Treaty Structure



The determination of whether pooled structures, coupled with alternative risk transfer instruments, can be more cost-effective, requires an analysis of the current structure of reinsurance arrangements in the East Caribbean market. As mentioned above, the primary reinsurance medium consists of the quota or proportional treaty which absorbs the larger portion of the risks written in the region. In order to evaluate the suitability of instruments (either risk financing or risk transfer) which use excess of loss type covers (XL), the pricing of the existing quota treaties needs to be compared on equivalent terms with XL rates.

Quota treaties are priced based on primary insurance rates, i.e. the premium over the sum insured is charged to the primary insurer minus the commission received by that primary insurer from the reinsurer. Conceptually, however, the 'layers' of loss coverage implicit in a quota treaty arrangement should be similarly priced to those under XL arrangements after taking into account differential transaction costs.

Table 11 illustrates this approach for the East Caribbean, i.e. using rate averages currently in effect in the OECS, Barbados and Trinidad andTobago. At the left side of the table, a proportional/quota treaty based on a EPL of 10 per cent and a weighted average premium of 0.59 per cent of sums insured is illustrated. Applying the premium cost over the product

Table 11. Analysis of ROL rates and Proportional Treaty Equivalents – Eastern Caribbean

Insured Val. Treaty[1]	EPL (%)	Prem. (%)	Coverage Point (%)	Coverage Point (%)	Prob. (%)	ROL (%)	Spread (%)	Weighted ROL Rate (%)
$100.00	10	0.6	5.7	5.7	15.00	17.00	2.0	1.0
			10.0	4.3	11.00	14.00	3.0	0.6
ROL Eqv.	5.9		14.3	4.3	7.50	10.79	3.3	0.5
			21.4	7.1	5.30	8.30	3.0	0.6
less rein.			28.6	7.1	3.50	6.64	3.1	0.5
commission	4.2		35.7	7.1	2.50	5.80	3.3	0.4
			42.9	7.1	1.50	4.90	3.4	0.4
			50.0	7.1	1.20	4.20	3.0	0.3
			57.1	7.1	0.75	3.90	3.1	0.3
			64.3	7.1	0.70	3.80	3.2	0.3
			71.4	7.1	0.35	3.50	3.1	0.3
			85.7	14.3	0.18	3.40	3.2	0.5
			100.0	14.3	0.15	3.35	3.2	0.5
				100.0				5.9

[1]Assumes after deductible under proportional/quota share reinsurance treaty.

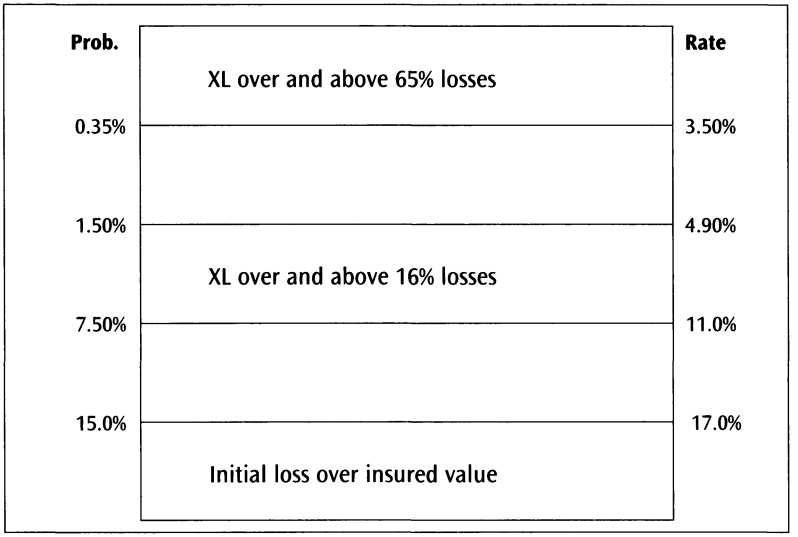
of EPL and value insured, this yields a rate-on-line (ROL) premium equivalent of approximately 5.9 per cent before taking into account commissions paid. After subtracting commissions to cover business acquisition and administrative costs (28 per cent of premium ceded), the result is a net 4.2 per cent ROL equivalent.

The 10 per cent EPL is used based on the more diversified reinsurer's portfolio which further minimises portfolio risk to below the individual company average EPLs in the region (15–20 per cent). As can be observed, the gross ROL figure derived from the quota treaty is equivalent to the average of all ROL layers shown at the middle and left of the table. Here, each level of loss is shown along with its respective probability of occurrence and ROL premium. At the rightmost side, the weighted sum of the various ROLs yields an average ROL of 5.9 per cent as well.

A summary of the above ROL pricing structure at selected probability levels is illustrated in Figure 12.

The above thus shows that reinsurance rates-on-line are consistent with primary premium rates under proportional/quota treaties. Nevertheless, it also shows that well managed low-cost local companies stand to gain from

Figure 12. Current Reinsurance Rates at Disaster Probability Points



reinsurance commissions received when these more than cover their expenses. However, it also means that local ESC companies may have biases towards higher premiums as these in turn receive higher reinsurance commissions, all else being equal.

Hhowever, the above summary also shows that reinsurance arrangements at various levels of risk can be tailor-made to improve the coverage/cost ratio of insurers and policy holders depending on the level of risk transferred abroad and the amount retained as 'own' capital. Since premium rates decline at the higher (less probable) layers of loss, this provides a number of financial structuring opportunities to optimise pricing, assuming a larger retention of risk at the lower levels where reinsurance is most costly.

Recently the capital markets (both bond and credit) have entered the reinsurance business through the provision of alternative risk transfer and financing instruments which are geared towards providing special purpose excess of loss covers, particularly at the highest loss levels. These developments are examined further in the next section to demonstrate how, under certain risk sharing arrangements, such instruments can provide efficiently priced sources of capital to fund insured risks. In addition, they can allow domestic insurers who pool their capital and increase risk reserves, to leverage retained capital in ways that can help to increase local insurance capacity. This would permit a reduction in the sensitivity of local insurance coverage to external supply crunches.

Transferring catastrophe risks to the capital market

A number of events have prompted capital market institutions to enter the catastrophe reinsurance business during the last decade. In particular, some of the colossal disasters experienced in the 1990s demonstrated the vulnerability of even the largest global insurers, and prompted the observation that reasonable 'reference' scale disasters, which could be expected, still have the potential to disrupt insurance markets if events occur at frequencies slightly above the norm. It was almost inevitable, given the sheer size of the capital markets, that capital from such sources would eventually be channelled to fund insurance risks directly. However, since capital market institutions are not typically risk underwriters in the classic insurance sense, the instruments developed to fund or 'securitise' risk sometimes have particular properties for measuring risk which are tailored towards the investor community that provides such capital. Capital market participation first manifested itself by way of credit suppliers that provided backing for government/industry partnerships via the financing of the highest layers of potential losses which insurers in disaster-prone regions had become reluctant to underwrite. These innovations have appeared primarily in the developed world markets. Nevertheless, they can provide immediate opportunities for catastrophe-prone countries. In the Caribbean some of these tools can be incorporated as part of a package of policy measures in order to implement sound and sustainable risk management and disaster funding strategies.

In response to the capital constraints that might affect global reinsurers (and therefore emerging market insurance sectors) during periods of recurring high frequency catastrophes, and in response to domestic risk aversion by primary insurers in the wake of major disaster events, the need for additional 'risk-bearing capacity' and long-term funding availability has generated a supply of risk capital from non-traditional sources, i.e. the capital and credit markets. While the reinsurance capacity has also increased by way of new industry players such as in the Bermuda market, the catastrophes of the last decade demonstrated that world funding reserves for potentially major events needed to be assured in ways that would not only avoid past cyclical supply/demand capacity constraints and associated price volatility, but also assure the future solvency of major insurance and reinsurance players. The response, therefore, of the capital and credit markets, far from being an indication of a replacement of reinsurance, has shown more precisely that both reinsurance and capital market instruments need to work together to best manage large event risks in ways that optimise risk sharing among property owners, primary insurers, reinsurers and capital markets.

The new instruments for managing catastrophe risk are not only used by those wishing to be insured in the traditional sense, but also by major reinsurers themselves who see the advantages of distributing risks to other markets, while putting less of their own core capital at risk. Those 'other' markets, whose capacities are practically unlimited in terms of financing the potential range of global catastrophe losses, have also the advantage of absorbing financial shocks with little or no 'bounce back' effect through the insurance markets, a characteristic which is particularly beneficial for countries which can be severely affected by the insurance industry cycles following natural disasters. Paradoxically though, the fact that such alternative instruments have entered the world stage may itself serve to dampen premium volatility which, in the past, was caused mainly by the absence of alternative capital sources. However, this implies that volatility in pricing may require a permanent presence and utilisation of alternative sources of risk capital by insurance industries throughout the world. This would be to maintain the supply of such capital available, while global insurance capital grows incrementally until it reaches a new plateau where catastrophic events might be more fully insured and funded. Both governments as well as private sector players in emerging economies can partake of such tools by pooling sufficient capital to allow accessing these alternative forms of risk financing and risk transfer.

Risk financing arrangements

One of the initial forms in which the capital markets became involved in paying for catastrophe losses was through financing arrangements for pooled structures. This took the form of a line of credit that was syndicated to banks, insurance companies and other lenders. The primary benefit of such an arrangement was that it made large sums of funds immediately available and was meant as a supplemental source to pay for the potentially very large losses. This was especially helpful in areas where reinsurers had high exposures and additional capacity was an issue. Another benefit of a credit facility was its relative cost in terms of having funds available to pay for losses. The commitment fee ranged from 0.25 per cent to 0.375 per cent per annum and the borrowing cost had a range between 0.75 per cent to 1.5 per cent over LIBOR for a term of up to seven years. The disadvantage with a financing arrangement is that any amounts availed of have to be repaid together with interest.

In order to enter into a financing arrangement, a distinct source of repayment had to be established and pledged to the lender(s) as security. This distinct source of repayment took the form of an assessment or surcharge to policy holders of a pool or, more often, spread to a broader base, typically all policy holders in a state. The California Earthquake Authority

had the former, while the Hawaii Hurricane Relief Fund and the Florida funds adopted the latter approach (see below). The order in which the credit facility was used in relation to the other claims paying sources (cash on hand, reinsurance, member company assessments, etc.) was a function of the objectives of the pool. In general, the credit facility was placed at the topmost layer (the last to be used) since the pools wished to avoid imposing assessments or surcharges to its constituents.

Another form of credit financing which has been employed is pre-event notes. These are bonds that are issued prior to any catastrophe event. The cash proceeds are placed in a trust and can only be used to pay for losses. The added advantages of issuing bonds relative to a line of credit are that the bonds have a longer maturity (10 to 30 years), fewer loan covenants, and less pre-conditions for the drawing of funds. The disadvantage is that the bonds are generally more expensive than a line of credit facility and require the immediate payment of interest.

The market for the securitisation of catastrophe risk

The securitisation of catastrophe risk, that is, the packaging of insurance risks into marketable financial securities, which is opening new options for catastrophe coverage, is manifested in the private capital markets in the USA, Europe and Japan under the following instrumentalities:

Catastrophe Bonds: Catastrophe bonds pay investors high yields, but are subject to default on all or part of principal and interest if a catastrophic event occurs during the life of the bond. Thus investor appeal is based on the high returns with low probabilities of default, while the insurer's interest is in obtaining additional reinsurance capacity which is made available for claims payments in the event of a disaster. Funds obtained from bond proceeds are normally invested in risk-free instruments which also help the insured to lower the eventual net cost of the interest coupon payments. In order to accommodate the desire of insurers and reinsurers to treat protection attained through catastrophe bonds and derivatives in the same fashion as traditional insurance, the approach in the capital markets has been to create a reinsurance contract between the ceding insurer and a special purpose vehicle (SPV) which then effectively securitises the contract on the market.[1] Such entities issue catastrophe bonds

[1]In most jurisdictions, without using an SPV, a regulatory drawback of catastrophe bonds is that, unlike straight reinsurance whose premium cost can be deducted from an insurer's gross written premium, the cost of securitising catastrophe risk cannot be deducted in the same manner. Thus, when considering securitised risk transfer instruments, risk-based capital criteria would appear to favour a company's net surplus position when using straight reinsurance versus having the same coverage using catastrophe bonds. Nevertheless, as discussed, financial markets have devised

to investors and, as a separate transaction, sell reinsurance to interested insurers who can then take advantage of the more favourable regulatory accounting treatment. The insured party is not subject to any reinsurer 'credit risk' either, as the insurance coverage is fully collateralised.

Contingent Surplus Notes: These financial Notes are essentially 'put' rights which allow the insured party to issue debt to pre-specified buyers in the event of a catastrophic event. The Notes are a risk financing (as opposed to risk transfer) mechanism but under regulatory norms can be considered as part of the insurer's available surplus or capital. The issuance of notes can be done in exchange for cash or liquid assets which are received from investors. Such liquid securities are kept in a trust which, in the event of a disaster, are exchanged via a financial intermediary for the surplus debt notes issued by the insurer to finance catastrophe loss claims.

Exchange Traded Catastrophe Options: The property claim service (PCS) options which trade on the Chicago Board of Trade as investment instruments, are mechanisms which provide the right of the purchaser to demand payment under an option contract, if the claims index surpasses a pre-specified level (the strike price). The indexes used cover different areas of the USA (east, mid-west, west) and reflect insurance industry aggregate reported claims which are converted into an industry index. A national index also exists, but the regional indexes permit hedging against large risks in specified areas. The market does not yet constitute a large segment of the insurance market but investors can profit from selling the options in diversified territories which are unlikely to suffer losses simultaneously (with corresponding option pay outs). Use of an index, rather than specific claims experience, can also result in 'basis risk', i.e. the risk that specific claims obligations do not necessarily exactly match the compensation amount from the option pay out. A drawback, however, is that insurance companies cannot deduct these costs as premium equivalents.

Catastrophe Equity Puts: Equity puts are also a form of an option which, for a pre-paid fee, permits the insurer to sell equity shares on demand to investors as a means of funding claims in the wake of a major disaster. Such instruments, as in the case of contingent surplus notes, are risk financing instruments and do not actually perform the traditional insurance function of risk transfer, though they provide immediate liquidity.

Catastrophe Swaps: Catastrophe swaps are another method of paying premiums for catastrophe reinsurance. Such swaps use capital market players as counterparties. In a catastrophe swap arrangement, an insurance portfolio with potential payment liabilities is swapped for a security

methods for overcoming such impediments, primarily through the establishment of offshore special purpose reinsurers.

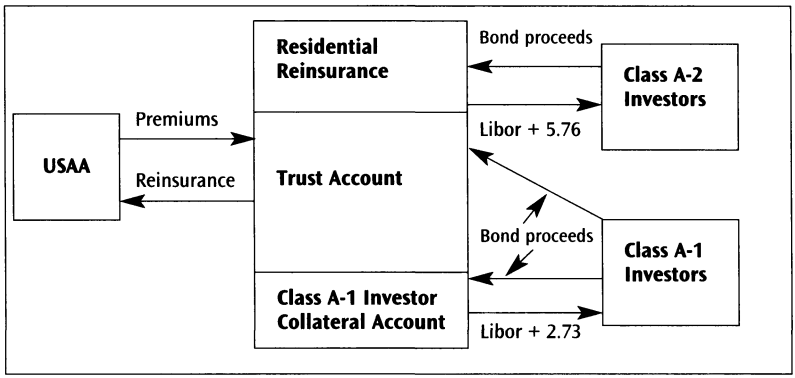
and its associated cash flows. An insurer takes on the obligation to pay an investor periodic payments on a specified security (or portfolio of securities) which the investor is liable for, while conversely, the investor takes on the potential liabilities under an insured portfolio, for example by making payments for catastrophe losses based on agreed measures of magnitude or severity (for example a catastrophe loss index). For the insurer, payments made on the investor's securities are equivalent to a reinsurance premium.

Weather Derivatives: Weather derivatives are contracts against weather change triggers and generally take the form of premium payments for contracts which provide payouts to the 'insured' in the event that a pre-defined number of days with a specified time period reach temperatures above or below the trigger point. Farmers in areas subject to crop freeze, for example, can purchase weather options whereby payment is made if the number of cold days below a certain point exceed a pre-defined period and temperature level. Similarly for drought or heat-affected areas, such weather derivatives can be purchased to invoke payment if hot weather remains in force for a longer forecast period (for example for utility, electric or gas companies). Parties in opposite weather areas can swap positions to insure interested counterparties for such transactions, although speculative investors can also benefit from the premium income earned in the case no trigger is invoked.

One of the earliest examples of successful securitisation of catastrophe risks, as well as one of the largest amounts of securitised risk done to date, involved the USAA Insurance Company's transaction (7/97 to 6/98) with Residential Re, which was a special purpose reinsurer set up specifically for this purpose. The outline of the structure is shown in Figure 13.

As can be observed, the USAA deal offered 'cat' bonds to Class A-1 and A-2 investors. Class A-1 received a lower bond yield but received protection on the principal in the event of a catastrophe exceeding the 'attachment' point of the contract (i.e. loss levels reaching up through the reinsurance layer which was covered by the bond). The two flows of bond proceeds shown for the *A-1 investors* reflect the fact that additional funds beyond reinsurance needs had to be raised in order to place part of the bond proceeds in a Collateral Account where they would be invested to return the principal to those investors. The remainder of the A-1 bond proceeds were kept in the trust account, subject to use in the event of a disaster. The additional interest cost of those extra bond proceeds, plus those used for reinsurance funding, was offset by the lower interest rate offered to the class A-1 investors. For the A-2 investors, the yield was much higher as they were subject to losing all principal. Residential Re

Figure 13. An Example of the Successful Securitisation of Catastrophe Risks



was the special purpose reinsurer set up to collect the 'premium' payments from USAA and pay for reinsurance 'claims'. The bonds had a dual trigger which included both hurricane strength and actual loss levels. As a comfort against moral hazard, USAA kept a high retention of risk ($1 billion), as well as a proportional/quota share reinsurance treaty above that level.

Disaster index contracts or parametric hazard triggers, as illustrated below, can also provide an efficient means of setting up insurance contracts since they depend on objectively measurable events to trigger indemnification. This can be useful for the protection of government assets, for example, since it skips the 'insurance loss adjustment' stage which requires site-by-site evaluation of damages. One drawback, however, is the 'basis' risk, i.e. the risk that the event 'trigger' does not necessarily correlate with losses on the ground. Nevertheless, this was successfully implemented under Parametric Re, a special purpose reinsurer used by Tokio Marine Insurance to obtain securitised reinsurance against earthquake risk. The 'parametric trigger' was based on earthquake intensity as well as on two grids rings specified around Tokyo and other Japanese cities (an inner and an outer area grid) to determine what reinsurance would be provided in the event of an earthquake.

In line with this type of 'parametric trigger' design, the following illustrates a hypothetical catastrophe bond structure and its issuance terms in which a 'multi-hazard bundle' is incorporated into the risk profile of the bond. While such bonds have not yet been issued to date, investors wishing to diversify against not only financial market movements, but also against concentrations of single hazards, may find such an issue attractive since some of the hazards (rainfall versus drought) are mutually offsetting.

Table 12. Parametric Re: Earthquake Intensity and Grids as used as Payout Triggers

Earthquake level: Richter Scale	7.1	7.2	7.3	7.4	7.5	7.6	7.7
% Bond loss: Inner City Grid Epicentre	25%	40%	55%	70%	85%	100%	
% Bond loss: Outer Grid Epicentre			25%	44%	63%	81%	100%

Figure 14. Grid Areas for Epicentre Determination

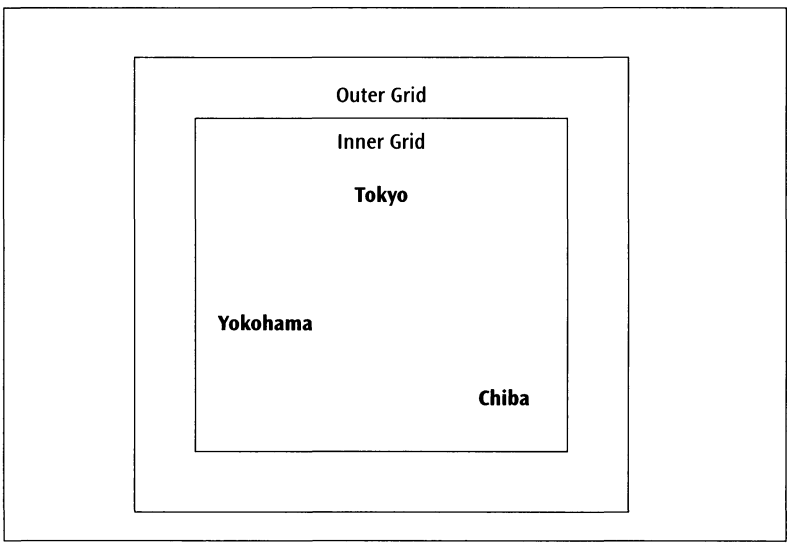
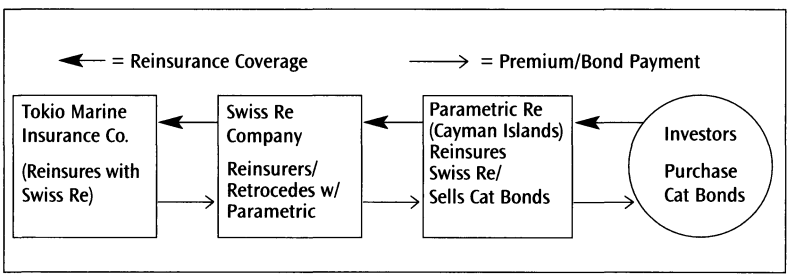


Figure 15. Insurance/Reinsurance Flow Structure



Source: Goldman Sachs

Figure 16. Structure of a Multi-peril Catastrophe Bond/Note using Weather Index Triggers

US $100,000,000 Issue

Terms of Note:

Maturity: 3 years
Coupon Interest (no event): LIBOR + 4.99
Expected (probability-adjusted) value of coupon interest: LIBOR + 4.93
Coupon Interest (post-event): LIBOR –2.40
Expected Loss: 0.79% of face value (probability-adjusted)
Expected value of yield given principal/coupon interest adjustments: LIBOR + 4.68

Index triggers for coupon/principal adjustment:

Earthquake:	Richter 7+ quake (specified locations/cities – first event trigger)
Hurricane:	Windspeed 120+mph (specified coastal locations – 2nd+ event trigger)
Flood:	Accumulated rainfall (defined period) 40+cm (specified locations – 2nd+ event)
Drought:	Accumulated (defined period) 2–cm (specified locations – 1st event trigger)

Coupon strip payment	Coupon strip payment	Coupon strip payment	Coupon strip payment
Earthquake Risk LIBOR + 5.5 (no event) Post Event Terms: LIBOR –3 Prob: 0.4%	Windstorm (hurricane) Risk LIBOR + 5.0 (no event) Post Event Terms: LIBOR –2 Prob: 1.2%	Flood (rainfall) Risk LIBOR + 4.6 (no event) Post Event Terms: LIBOR –2.5 Prob: 1.1%	Drought (rainfall) Risk LIBOR + 4.9 (no event) Post Event Terms: LIBOR –2 Prob: 0.3%
Weight: 25%	Weight: 25%	Weight: 30%	Weight: 20%

Weighted coupon interest payment above LIBOR (pre-event): 0.25*(5.5) + 0.25*(5.0) + 0.25*(4.6) + 0.20*(4.9)
(no loss of principal) = 4.99%

Expected value: coupon interest above LIBOR, taking into account event probabilities

		Coupon *strip*	Weighted *weigh*	*rate*
Earthquake risk:	((0.004)*(–3.0) + (1–0.004)*(5.5))	5.47	0.25	1.37
Hurricane risk:	((.012)*(–2.0) + (1–0.12)*(5.0))	= 4.92	0.25	1.23
Flood risk:	((.011)*(–2.5) + (1–.011)*(4.6))	= 4.52	0.30	1.36
Drought risk:	((.003)*(–2.9) + (1–.003)*(4.9))	= 4.88	0.20	0.98
			1.00	**4.93**

Weighted coupon interest payment below LIBOR (post-event): 0.25*(–3) + 0.25*(–2) + 0.3*(–2.5) + 0.2*(–2)
(with loss of principal) = –2.40%

Expected discount on principal, taking into account event probabilities (over 3-year period):

		Loss of Principal
Earthquake risk:	0.004*100*0.25	0.10
Hurricane risk:	0.012*100*0.25	0.30
Flood risk:	0.011*100*0.3	0.33
Drought risk:	0.003*100*0.2	0.06
Total ($US millions)		**0.79**

Expected yield on note/bond taking into account probabilities of loss of interest/principal (post event):(note: event time is not specified, but averaged out over bond repayment period – assumes annual coupon)

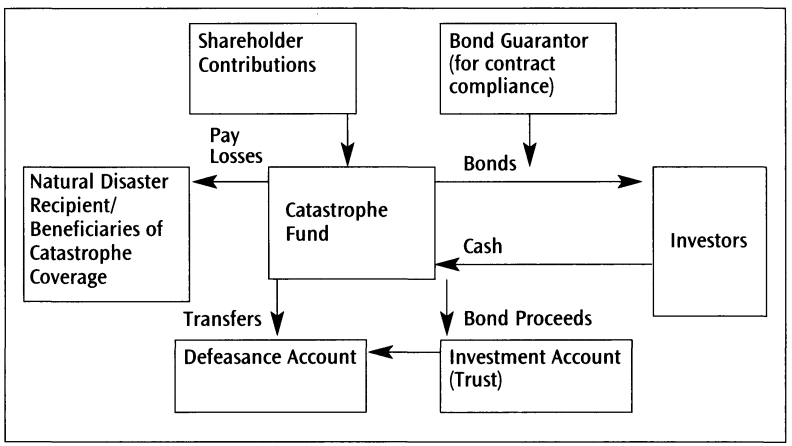
Years:	0	1	2	3	
Cash flows:	–100	4.93	4.93	4.93	
($US m)				99.2	
Total:	–100	4.93	4.93	104.1	Yield (IRR): LIBOR 4.68%

Cost/benefit factors in utilising capital market instruments

A simple numerical example shows how capital markets can supplement insurance and reduce costs. Assume that a primary insurance company calculates the probability of a loss of more than US$15 million, but less than US$25 million, at 10 per cent. If the primary insurer purchases reinsurance at this rate, it will break even over time. Adding administrative costs, operating costs, and a risk 'load', the reinsurer might charge a premium of 14 per cent (10 per cent + 4 per cent).

Alternatively, the primary insurer could issue a US$10 million bond to investors, then put the US$10 million in U. treasury notes paying, say, 5 per cent. The investor's principal of US$10 million would be put at risk as part of the contract. If a catastrophe with losses exceeding US$25 million occurs, the investors might lose all their principal. For putting their principal at risk, the investors would demand at least a 17 per cent return: 5 per cent as risk-free interest, 10 per cent for the 'pure' risk of losing their principal (akin to a default risk), and 2 per cent as an additional risk load. Net of the investment in treasury notes, the insurer's total financing cost would approach 12 per cent, compared with the 14 per cent for traditional reinsurance at that given level of risk.

Figure 17. Institutional/Financial Structure for a Catastrophe Bond Scheme



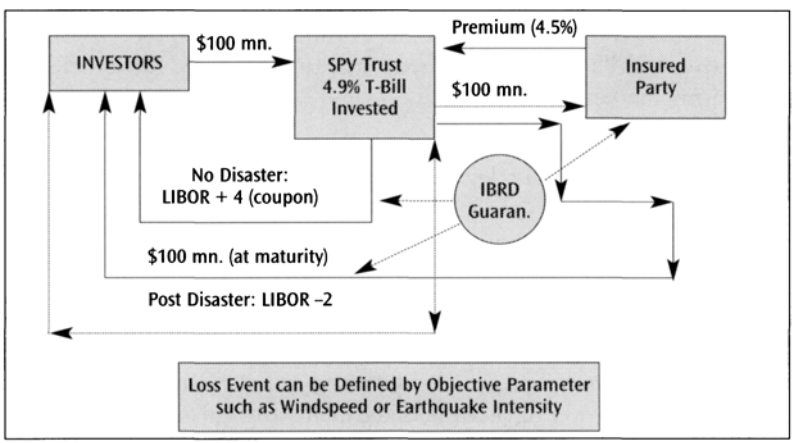
In this example, a 'Catastrophe Fund' can be privately or publicly owned (see Fig. 17). In the international private markets, as mentioned, this usually takes the form of a 'special purpose vehicle' which serves as a legal/financial entity for investing proceeds obtained from catastrophe

bonds and paying investors the bond coupon. In the event of an actual catastrophe, funds would be paid to the insured recipients. The defeasance account is used to accumulate funds for repayment of the bond principal if investors are to receive some level of 'principal protection' in the event of a catastrophe event – in this instance, as discussed earlier, the funds raised usually exceed those needed for indemnification since some are set aside solely for the purpose of repaying the principal. However, some of these bonds are structured so that the investor loses part or all of the principal and some interest in the event of a catastrophe. The compensation is that the bonds usually pay yields much above the market level for similar 'default risks'.

In yet another option, however, the insurer could arrange a standby credit of US$10 million with a 2 per cent commitment charge and an interest rate of 12 per cent that kicks in if the loan is needed. If a catastrophe occurs, and assuming a ten-year repayment period for principal (yielding a combined principal plus interest 'insurance' cost equivalent to 18 per cent), the expected financing cost would be 3.6 per cent (0.1 [18 per cent] + 0.9 [2 per cent]), much lower than with direct reinsurance.

These capital market schemes to supplement insurance have many possible variations. These range from full risk transfer with no financing (where the full principal is at risk, just as in reinsurance) to zero risk transfer with full financing (full repayment of principal). Figure 18 illustrates the typical 'full risk transfer' catastrophe bond arrangement, showing the pre-event and post-event cash flow payments (post-disaster event flows are indicated by dotted lines).

Figure 18. Securitising Catastrophe Risk with Catastrophe Bonds for Creditworthy Disaster-prone Countries



Implicit in the above structure is that disaster-prone countries might be sufficiently creditworthy to issue 'cat' bonds for investors to purchase. Support by the International Bank for Reconstruction and Development (IBRD) in the form of a contractual risk guarantee would enhance the credit rating of such bonds and potentially improve their marketability. The attractiveness of such bond issues could also be enhanced through the use of 'parametric' indicators to trigger eligibility for payment. Such triggers mean that measurable physical events, such as wind speed or earthquake intensity at a defined location, could trigger the 'insurance payment', instead of using the traditional loss-adjustment process based on a structure-by-structure analysis of damage. As discussed in this paper, parametric triggers imply some basis risk.

It is difficult to pinpoint precisely why the private sector does not always fully respond to such market needs. The competitive market-place is a dynamic, ever-changing world where demands and supply are changing constantly in response to underlying societal and natural phenomena. In the case of catastrophe insurance, a new era began after Hurricane Andrew which is still in the infant stage of its development. The slowness of the response is partly explained by the extensive legal and regulatory barriers that grew up around the insurance industry over the past century, and which required some modifications. For example, in the case of 'cat' bonds, even in developed economies, substantial time was spent obtaining opinions and rulings from various jurisdictions stating that investors purchasing such bonds would neither be acting as unlicensed insurers or violating anti-gambling laws. Substantial additional time elapsed working with insurance regulators to assure that such bonds purchased by insurers would be assessed their risk-based capital on bonds, and not as higher-risk securities which carry a more punitive rate. Other regulatory issues pertained to disclosure, listing and timing requirements, withholding taxes and revisiting the definition of insurance – aspects where the multilateral development institutions could be crucial in accelerating market development.

A factor which could greatly assist the development of an ESC reinsurance pool is the recent legislation in some Caribbean countries, for example Trinidad and Tobago, and Barbados, which allows for a tax deductible catastrophe reserve. An ESC reinsurance pool would benefit from this provision.

Catastrophe programmes aound the world

Japan, New Zealand, France, the UK and the US states of Hawaii, California and Florida have all adopted plans to deal with catastrophe

risk. In Japan, New Zealand and California the risk in question is earthquake. For France the main concern is flood. For Hawaii and Florida, the risk is hurricanes. For the UK, the risk is terrorism.

Special megacatastrophe programmes

In the USA, the states of Hawaii, Florida and California have special programmes to deal with megacatastrophes.

Hawaii. The Hawaii Hurricane Relief Fund (HHRF) works as follows. Insurance companies are allowed to write home owners' insurance with a hurricane exclusion. Each participating insurance company then acts as a servicing carrier for the HHRF, issuing the insured a separate hurricane policy and collecting a separate premium which is forwarded to the HHRF. The HHRF receives ongoing revenue from hurricane premiums, insurance company assessments on property business and mortgage recording fees (Fig. 19).

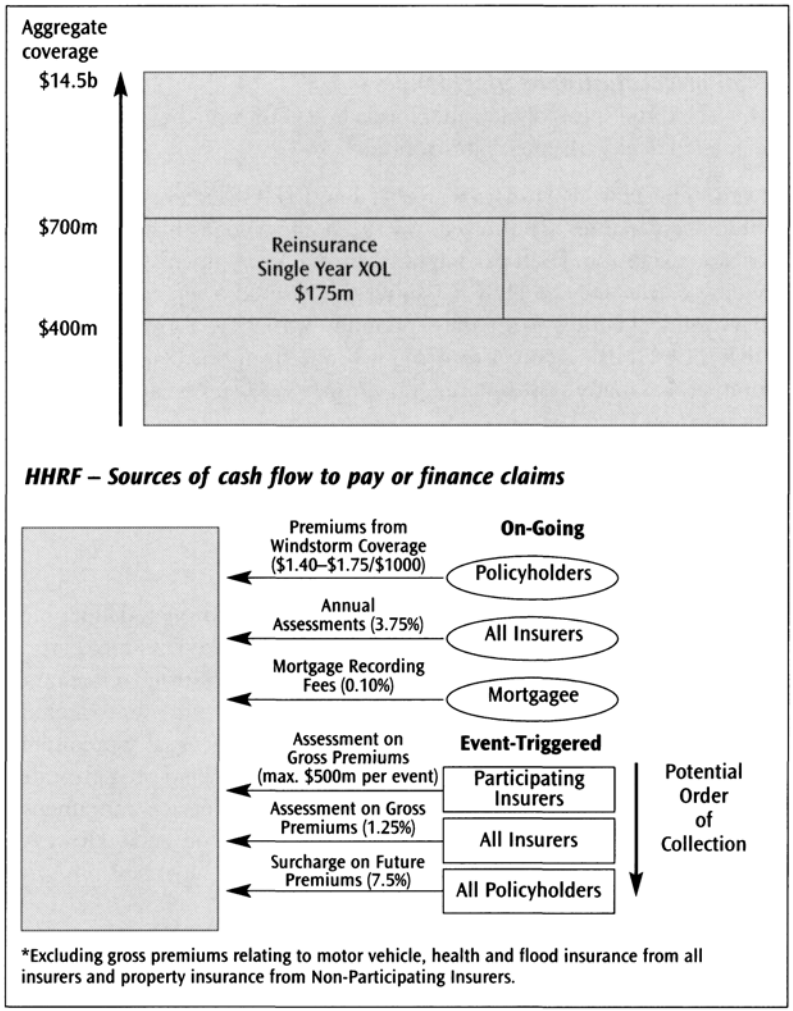
The plan envisages providing insurance to cover a megacatastrophe costing up to $2.1 billion. This is over 1.5 times the cost of residential damage caused by Hurricane Iniki which hit Hawaii in 1992.

Under the Hawaii scheme, the first 10 per cent in loss from a megacatastrophe is assumed to be borne by home owners through deductibles. The next loss layer would be paid by private insurance companies participating in the HHRF. The following loss layer comes from reinsurance purchased by the fund. The last $750 million comes from a line of credit which is secured by future surcharges on all property/casualty premiums. If losses exceed the total coverage amount, claims are paid on a pro-rated basis. Coverage occurs when the National Weather Service announces a hurricane watch and ends 72 hours after the hurricane ends. However, the HHRF is now being phased out as private insurers have begun returning to the market.

Florida. Florida has a number of programmes in place to alleviate the availability problems which developed in the state following Hurricane Andrew.

The state-run Joint Underwriting Association (JUA) is a property insurance pool that was set after Hurricane Andrew to provide home owner multi-peril insurance to people who were having difficulty obtaining it. The JUA provides a market of last resort for comprehensive coverage, for policy holders in Florida who cannot purchase coverage in the private market. At its peak in 1996, the JUA had almost 1 million policyholders, a market share almost equal to the state's largest private property insurers. However, marketplace conditions appear to be improving. The various JUA incentive programmes have been successful in attracting new

Figure 19. The Hawaii Hurricane Relief Fund



Source: Chase Manhattan Bank

insurers to the state and encouraging others to take on some JUA policy holders. With special incentive programmes, various companies submitted proposals to depopulate the pool, a process that began in February 1996. Meanwhile, some of the state's largest residential property insurers are halting or limiting the sale of new policies, particularly for homes in the southern parts of the state and along the coast, and other insurers are not renewing some existing policies or requiring home owners to purchase windstorm coverage from the windstorm pool.

The Hurricane Catastrophe Fund is a state-run catastrophe reinsurance programme designed to encourage insurers to stay in the Florida marketplace. It was created following Hurricane Andrew in response to concerns about insurance availability. The fund is financed by residential property insurers doing business in the state (some 285 companies), based on their exposure to hurricane losses. It currently has a capacity of $11 billion for major hurricane claims, made up of about $3.1 billion in funds and $7.9 billion in borrowing capacity. The fund made payouts in 1995, although only minimally, with $9.5 million in claims payments for Hurricanes Opal, Eric and Allison.

The Florida reinsurance fund was created in an atmosphere where insurance companies were withdrawing from the market. However, the state of Florida does not regard the risk of hurricanes as uninsurable and so far insurance companies share this view. The Florida Hurricane Catastrophe Fund is not a reinsurer of last resort. The fund provides reinsurance on a mandatory basis to primary companies writing property insurance in the state. The fund is exempt from federal income taxes, which enables it to accumulate funds faster than a private sector fund. The fund can borrow to pay losses. The borrowing capacity reflects the mandatory nature of the fund. It basically has the power to 'tax' primary insurance companies and use the 'tax receipts' to service debt.

The Florida Windstorm Underwriting Association (FWUA) is another state-sponsored entity set up specifically to provide insurance against windstorm risks for beach area and other properties which were underserved and where insurers were withdrawing from the market. The FWUA only insures against windstorm damage and thus encourages private insurers to maintain their presence in coastal areas to cover non-windstorm property perils.

The FWUA is a private association governed by a 13-member Board of Directors, eight of whom are elected by member companies and five of whom are appointed by the Insurance Commissioner. Membership of the FWUA is mandatory for all licensed insurers writing property coverage in Florida. Pooling of windstorm risk in eligible areas allows the industry to continue to provide other coverage and spread the payment of windstorm losses over time. Member companies can also reduce their exposure to the FWUA by voluntarily writing coverage in the eligible areas.

The FWUA has an immediate claims paying capacity equal to a 100-year probable maximum loss of over $5 billion. These claims paying resources include cash on hand, assessments that will be available from its members, reinsurance from the Florida Hurricane Catastrophe Fund, pre-funded bond issuance of $1.7 billion and a $1 billion committed line of credit.

The FWUA can pledge the assessments from members to borrow for loans or bonds that it is authorised to issue on a direct basis or through local governments.

California. The California Earthquake Authority (CEA) began operating in late 1996. A state-run programme funded in part by insurers, the CEA provides residential earthquake insurance. It was created by law in 1995 to ease the home owners and earthquake insurance availability crisis brought about by fears of an earthquake more damaging than the 1994 Northridge quake which cost $12.5 billion in insured losses. The plan preserves the mandatory offer of earthquake coverage – insurers who choose not to participate in the plan will be required to offer their own earthquake coverage to their home owner policy holders. Under the plan, which needed the participation of 70 per cent of the market of California's home owners' insurers before it could start up, policy holders of participating insurers purchase earthquake coverage from the CEA. The CEA policy offers a scaled-down policy covering the home but not other structures such as swimming pools and garages. Contents coverage is limited to $5,000, and additional living expenses are capped at $1,500. The amount deductible on the home and on contents is 15 per cent and is applied to the total loss, not separately for each coverage. Factors used to determine premiums include the location of the dwelling, the year it was built and the type of construction. A 5 per cent discount is applicable if the dwelling was built prior to 1960, walls are braced in a specified way and hot water heaters are secured to the building frame.

The CEA has a funding plan structured in layers which totals $7.2 billion. The funding structure is as follows: the first $475 million in claims payments would come from the working capital of the participating insurers. These insurers would also be responsible for the next $2.15 billion in losses, which would be collected as assessments. The responsibility for the above sums will remain in effect for the next 10 years, so that if an earthquake causing more than $2.6 billion in damages does not occur within the first 12 years of the CEA's operation, insurers will be relieved of this layer of liability since the fund will have built up sufficient capital. In the event that a quake causes more than $2.6 billion in damage, an additional $1.4 billion in reinsurance payments will be available. The next layer will be provided by $0.7 billion which the CEA is authorised to borrow. This layer will be repaid through policy holder assessments totaling up to 20 per cent of the earthquake premium. After these layers, $1.1 billion will be available as reinsurance from the Berkshire-Hathaway Insurance Group. The last $1.4 billion will be paid from assessments on participating insurers following an earthquake.

Statewide, earthquake coverage costs $3.91 on average for $1,000 of insured coverage. In low-risk areas of California, premiums would be $2 per $1,000. Residents in higher-risk areas, such as the San Francisco Bay region and some parts of Los Angeles, would pay premiums as high as $5.25 per $1,000, the highest rates allowed by the CEA. At these rates, the average Californian would pay $782 for $200,000 in coverage, but in the highest risk areas the same coverage would cost $1,050. However, because the rates are capped at $5.25, home owners in the lowest risk areas subsidise those in higher risk areas.

New Zealand. In 1944, New Zealand enacted the Earthquake and War Damage Commission to cover 'uninsurable risks'. The programme was extended over the years and now covers earthquakes, wars, flood, tsunamis, volcanoes and hydro-thermal activity. Properties are insured on an actual cash value basis, not replacement cost basis. The price for coverage is relatively low at $0.5 per $1000 of fire insurance coverage.

The programme can be viewed as successful in that it has been solvent and has been able to pay for a number of disasters that have hit New Zealand over the years. There is concern, however, in that the commission would not be able to handle 'the big one' – meaning a major earthquake in Wellington, estimated to cost over $2 billion. It is worth noting that in 1990 the New Zealand government made a raid on the fund for $239 million. This is a concern with all long-term funding mechanisms. As the fund builds and the money is not used, legislators may seek a way to use the funds for other purposes. The programme is compulsory and does spread the risk over time, as it calls for the building up of a fund.

France. In 1982, the French government instituted a mandatory programme to pay for floods and other natural disasters. A flat percentage fee is charged on all non-life policies. Insurance companies then provide coverage for the specified perils. The insurance companies can in turn get reinsurance from the government-owned reinsurance company, Caisse Central de Reassurance (CCR). The programme has been solvent, but there is concern that a major flood could exhaust its capacity which would require activation of the government guarantee and possibly trigger an increase in rates. The programme is mandatory and spreads the risk over time. Recently, the 1999 damage caused by windstorms Lothar and Martin, as well as the Dordogne floods, have largely depleted the CCR.

Japan. The Japanese earthquake programme covering residential properties was established in 1966. Under the programme, primary companies sell earthquake insurance. Home owners are not required to buy the product, and since it is expensive few do. The number of policies sold in

1994 totalled only 3.1 million, less than 10 per cent of the market.

Primary companies reinsure their risk 100 per cent with the Japanese Earthquake Reinsurance Company (JER), a government entity. The JER in turn retrocedes some of the risk to the private reinsurance market. The Japanese government provides the rest. In 1994, 85 per cent of JER's exposure was with the government and 15 per cent in the private market.

The programme calls for high levels of co-insurance by policy holders. For example, in the case of a 'half loss', meaning a loss between 20 to 50 per cent of value, only 50 per cent of the loss is covered by insurance. In addition, the Japanese government budgets each year for a certain level of payment for the programme. The current level is about $18 billion. If losses are higher, claims are pro-rated. For example, in the case of a $36 billion disaster, claimants would get only half of what they would receive for a disaster below $18 billion.

The Japanese programme is not mandatory and hence there is low penetration. It should be emphasised that the underlying viewpoint in Japan is that the earthquake risk is basically uninsurable. This position is rarely stated explicitly, but the reality is that Tokyo is built in an active fault zone and a major quake could cause damage costing hundreds of billions of dollars.

Spain. Consorcio de Compensación de Seguros. Spain is exposed to a whole range of natural disasters, namely earthquakes, volcanoes, windstorm, floods and hurricanes, but of all the hazards floods are the most severe cause of huge losses. It is interesting to note that the origin of the Consorcio is not related to losses due to natural disasters but losses as a result of riots during the Spanish Civil War in 1936–39. The way Consorcio handled the damages claimed as a result of civil war was by issuing bonds which were accepted as cover for the technical reserves of the insurance companies. The repayment of the bonds was handled by imposing a surcharge levied on the premiums for certain classes of insurance (fire, theft and special covers) which had to be collected by the insurance companies and paid to the Consorcio.

The Consorcio is a state organisation with its own legal status, full capacity to operate and capital independent of the state. One of the unique features of Consorcio is that it defines peril based on qualitative rather than quantitative aspects, that is, based on the enormous loss potential that they are likely to generate, rather than providing protection conditional upon events occurring which affect either a very high number of insureds or a very wide territorial area. This eliminates the need for an event to be officially declared as a peril, as is the case in other pro-

grammes, in the process minimising subjectivism and accompanying delays in paying the claims.

Insurance covering extraordinary risks is obligatory under the system. The deductible sum is 10–15 per cent of the amount of the losses, depending upon the sum insured, but in no case exceeding 1 per cent of the sum insured or less than Ptas. 25,000. The primary source of funds to Consorcio is its own premiums and surcharges. Given the risks, with high loss potential, assumed by Consorcio, and also given that it is a state organisation, it is backed by a state guarantee.

Other Countries. Some countries have also introduced special insurance programmes to cover acts of terrorism. In Northern Ireland, the programme is strictly governmental. In England, a special programme to cover acts of terrorism was put in place following two major explosions in central London in the early 1990s. Acts of terrorism are reinsured by a pool, 'Pool Re', which can borrow from the Bank of England when its own resources are exhausted. South Africa has specific government programmes to insure against property damage caused by terrorism.

Other US catastrophe programmes

In the USA, a number of programmes are in place to address the issue of 'uninsurable risks', meaning risks that cannot get coverage from the 'voluntary market', that is, from private insurance companies. For property risks, 31 states have FAIR (Fair Access to Insurance Requirements) Plans. These Plans are mainly used to provide property insurance in inner cities. However, in a number of states they are used to cover other 'hard to insure' exposures. For example, in California, the FAIR Plan covers homes exposed to brush fires and in New York the plan covers beachfront homes on Long Island.

Seven southern states have Windstorm Plans, which provide coverage for the wind peril alone. All of these plans (FAIR and Windstorm) operate by spreading the risk among insurance companies operating in the state. None is backed by the state government. In addition, each state has in place a guaranty fund to pay the claims of insolvent insurers. The guaranty fund is also supported by insurance companies with no guarantee or backup from the state government.

Market Assistance Plans (MAP)

Three states, New York, New Jersey and Texas have utilised Market Assistance Plans (MAPs) to provide coverage for shore properties. MAPs are voluntary mechanisms set up by the insurance industry in co-operation

with the state insurance regulators to provide insurance when there is a 'temporary' market failure. MAPs were used for the provision of liability insurance in the 1980s, when there was a short-term availability crisis for that coverage. In New York State and New Jersey the viewpoint is that the current shortage of property insurance is temporary and affects only a small number of property owners. So rather than create a whole system to handle the problem, MAPs are used. In a MAP, companies volunteer to take on risks that are declined coverage in the voluntary market.

In Texas, which does not have a FAIR Plan, a voluntary MAP now covers more than 25 per cent of the population and 427 zip codes. In addition, another initiative, the Property Protection Programme, provides insurers with financial incentives to offer basic residential insurance coverage which can be tailored to fit the specific needs of people in inner city and rural communities as well as areas prone to severe hailstorms. The incentives are in the form of state premium tax credits and credits against assessments for the Beach and Windstorm Plan, known as the Catpool. This programme is available in many of the same zip codes as the MAP. Companies representing more than two-thirds of the market are participating. The Insurance Commissioner also requires the state's Beach and Windstorm Plans to offer higher deductible options which range from 1.5 per cent of policy limits to 5 per cent. The new options percentage went into effect in May 1996.

Linking capital markets to emerging economies' risk management strategies

The above examples show how various jurisdictions and markets around the world handle the problem of managing catastrophe risk. In most cases, these examples have addressed the needs of highly developed markets wherein the transfer of large risks has been accomplished with the participation of capital market players in those same markets. While small emerging economies subject to natural disasters may not domestically hold sufficient capital to absorb such risks within local markets, there is no reason why they should not have full access to the range of tools available from the international markets for risk management purposes. The above examples show that combining reinsurance, risk-linked securities and credit support can provide more optimal mechanisms for financing and transferring catastrophe risks where they can be shared within larger pools of capital.

Governments and the private sector in disaster-prone countries can and should exploit such mechanisms to the fullest extent in order to assure that national development is least affected by economic and financial shocks from such disasters. Multilateral institutions can help by providing

the necessary credit enhancement and information transparency to link local risk-management strategies with external risk markets. The next section of this paper more fully describes how such arrangements can be viably structured.

Financial risk-management parameters and options for a regional catastrophe insurance pool

In the process of risk management, Caribbean governments and insurance companies need to implement a range of financial and policy tools to assure the optimal coverage of risks within budgetary and fiscal affordability limits. For risks which might have catastrophic consequences, the transfer abroad presents a key element in this strategy. However, the extreme of this approach, without undertaking any domestic-based risk management efforts (in the financial and physical spheres), does not result in optimal catastrophe management practices in the long run, given the exposures to both catastrophic, as well as insurance market, risks. In addition, the traditional approach does not permit the effective development and strengthening of domestic insurance industries. Therefore, given the availability of regulatory strategies and financial instruments for risk management, the pooling of catastrophe risks at the regional level represents a comprehensive approach which resolves many of the structural problems experienced in the past. Pooling not only institutionalises the coverage via insurance of catastrophic risks for both the private and public sectors, but also allows more standardisation in the rating and pricing of such risks. Pooling also provides more leverage to cover risks with the limited capital available. By retaining some part of the risk which is bearable, this also helps stabilise the availability of such insurance funding and its pricing. This is accomplished via the more efficient accumulation of catastrophe reserves which can help buffer some of the global market risks related to natural disasters.

In this section, a financially feasible proposal for an ESC catastrophe insurance fund is analysed. The section is designed to illustrate the concepts and challenges of creating such a fund, adapting the international experiences and market mechanisms to the ESC context.

Coverage for hurricane damage would begin for an island from the moment a hurricane watch is declared and would end 72 hours later. Drawing the line in this fashion has the benefit of clarity. However, the definition could result in apparent inequities, particularly when an island is hit by a tropical storm which subsequently increases to hurricane strength and damages property on another island. The wind speed threshold (even

if below hurricane strength) could therefore be defined *a priori* as a 'qualifying' event.

Insurance companies would sell the hurricane policy for the ESC fund, which would be a compulsory coverage, enforced by mortgage lenders. Premiums would be collected by the ESC fund and allocated in a two-step process of reinsurance and financing. The financing would involve lending and capital markets which would provide a line of credit to the fund. In the event of hurricane damage above specified loss levels, the credit facility would be activated and funds provided to the pool. For illustrative purposes, let us assume that a standby credit to the fund totals $200 million. In the event of a hurricane costing, say, $500 million, and following the exhaustion of the available insurance and reinsurance capacity, the lender would disburse $200 million to the fund to pay claims for losses above reinsured levels. The fund, in turn, would then be repaid by industry participants of the region on a basis proportional to their hurricane loss exposure. Funds could be recouped by adding a tax or assessment to property/casualty insurance premiums, or imposing some other form of taxation as in the Hawaii Hurricane Relief Fund illustrated earlier.

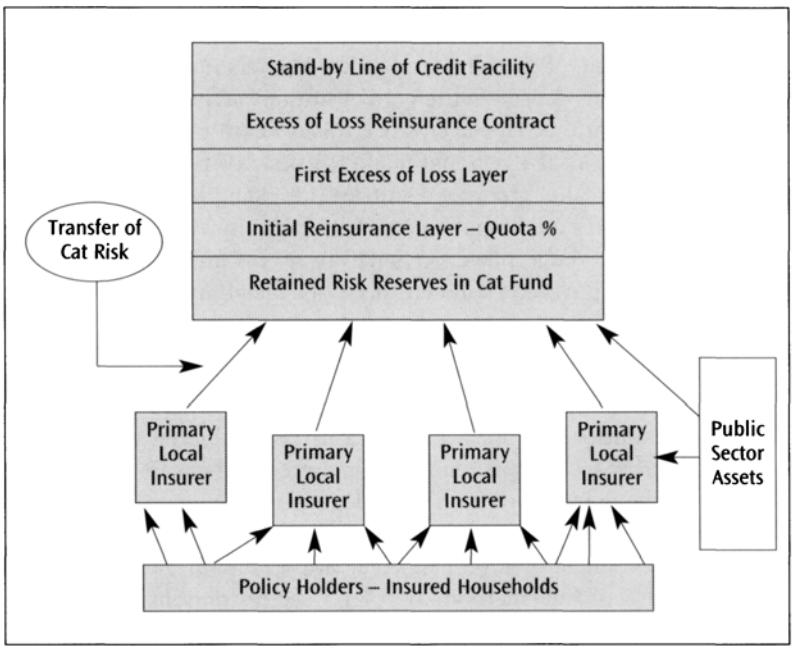
To review the potential cost parameters of such a programme, we initially assume that interest rates payable on sovereign risks in the ESC region are about 10 per cent. However, if the fund came with a World Bank guarantee or loan facility, rates could be significantly lower. With a 15-year repayment period, principal plus interest amortisation on the $200 million at the 10 per cent interest rate would be $26 million per year. This is 0.2 per cent of GDP in the ESC region, and would not constitute a major burden for the region's economies. As more hurricanes caused damage to islands, this cost could rise. However, based on the analysis of hurricane frequency, these costs would be manageable. It would also be feasible to create a layer of reinsurance coverage of over $500 million, so that damage from small but more frequent hurricanes could be covered without recourse to the financial markets.

Beyond the subsequent $200 million in financing, the ESC fund could purchase additional reinsurance if needed, up to the Estimated Expected Loss (EPL) level for the region if this was not yet covered and believed to be between $1–$1.2 billion. For the sake of clarity in this first exposition, the EPL is assumed to be $1 billion.

The concept of creating regional pools for the purposes of reinsuring local primary insurers, has been debated often in the Caribbean. There are several options which can be considered in the design of regional pools, although key aspects to be taken into account are whether the creation of a pool gives incentives to primary carriers to reduce dependence on

commercial international reinsurers solely for the associated commission income, and to what extent a pool itself will subsequently cede part of its coverage to international reinsurers (i.e. to optimise risk management). Both these issues will to some extent determine the success and functionality of an insurance pool. The critical criteria should be the extent to which any pool arrangement is able to generate genuine additional capacity (see Fig. 20) rather than the reshuffling of existing capacity levels.

Figure 20. Catastrophe Risk Transfer Structure



Reinsurance pool and risk funding arrangements

A key aspect to consider would be how the pool itself would retrocede[1] some of the risk to international commercial reinsurers and whether the pool would be a reinsurer at all versus a primary insurer for catastrophe risk. Sufficient initial capitalisation and a minimum ongoing level of working capital would be required of the pool to assure that it retains sufficient coverage to meet its objectives. The result of retroceding too

[1]'Retrocession' refers to the reinsurance of an already reinsured portfolio, that is, property which is initially insured by a primary insurer, is then reinsured internationally and where the reinsurer insures again (or retrocedes) the covered portfolio to yet another reinsurer. Some reinsurers who accept retroceded coverage generally specialise in catastrophe levels of coverage.

much of its portfolio would be likely to invalidate much of the benefit of establishing a pool unless, of course, the excess of loss limits for such retrocession were at the higher levels of coverage, thus avoiding excessively high premiums and associated volatility. Reinsurers will, of course, also need to be convinced to take on any of the risks from a pooled portfolio at any level of coverage. However, this issue can be addressed by developing *a priori*, and providing, transparent information showing the derivation of the probable loss values of the pooled risks backed by methodologically robust techniques covering country-by-country and sector-by-sector risk assessments. including damage and disaster event probability measures. In terms of private sector issues, there are very valid arguments for some of the large and secure carriers not to participate at all in the pool, thus depriving the pool of substantial premium income to maintain its operations. However, since this concern is in part due to the segmented quality of the regional market, it may be preferable to establish a pool for a smaller group of countries (for example the OECS countries or a subregion excluding the larger countries) in which the insurance industry has fewer large players, regulatory norms are standardised and where risk sharing would be much more beneficial given the small size and vulnerability of their national economies.

The pool should be administered by an independent party coupled with best practice underwriting and financial policies and should establish participation conditions for local primary carriers, including meeting prudential practices such as maximum limits for ceding coverage (i.e. some rational minimum local retention), coupled with minimum capital requirements and portfolio risk assessments based on a commonly understood methodologies (including property valuation, hazard zoning, disaster event frequencies, EPL methodology, land use restrictions and building code compliance).

In terms of the financial management of a regional pool, its assets would be invested mostly overseas to achieve maximum returns and provide needed foreign exchange in the event of disasters. The management function of a pool would broadly equate to that of a large insurance company, with the pool's chief executive operating under authority delegated by the board of directors composed of pool participant representatives.

The initial full capitalisation for regional pools or disaster reserve funds in line with actuarial requirements poses some funding risks, particularly with respect to the payment of claims. For this purpose, it is envisaged that during the early years of the establishment of any such fund, a multilateral institution might provide a guarantee of financing or a contingent line of credit for quick disbursement if the pooled disaster fund assets are

insufficient to provide the requisite upper level loss coverage for eligible indemnity payments. Alternatively, a pre-funded arrangement can be made by issuing long-term bonds in the capital markets and making the proceeds available to the ESC fund (similar to that of the Florida Windstorm Underwriting Association discussed above).

A long term credit facility would be favourable in that it would be:

(i) committed or funded *a priori*;

(ii) of longer-term maturity, thus lessening the repayment load;

(iii) of lower financing cost than comparable commercial lines of credit due to a lower borrowing cost;

(iv) less costly from an actuarial viewpoint than reinsurance, at the highest potential loss layers.

The basic rationale for this approach is to better protect the Caribbean economies with improved risk-management tools. The objectives are to diminish economic volatility in countries subject to shocks which are unrelated to international market movements, or where countries affected by single natural events are disproportionately affected. Key in this respect is the need to reduce the level and volatility of catastrophe insurance premiums, and to increase overall coverage, given the inherent cyclical risks in the region. The objective would be to develop domestic financial industries and insurance-linked mechanisms which can help to increase the private sector capacity to better absorb and spread these risks.

In this context, the long term strategy is to ensure more sustainable development in the region by supporting development and implementation of risk sharing and risk transfer instruments that could adapt the latest risk financing and risk transfer technologies to the needs of the small Caribbean states. The objectives in this context would also include:

(i) implementing more optimal risk transfer and institutional mechanisms to improve the efficiency and operation of insurance markets;

(ii) providing liquidity for more rapid reconstruction in those cases where damage was incurred, including for the uninsured housing sector which is typically disproportionately affected;

(iii) reducing the vulnerability of structures through the improvement and enforcement of building code standards and land use/construction planning.

The proposed strategy to address these problems takes into account the latest development in catastrophe risk transfer schemes, including those

piloted by the natural disaster funds in Florida, Hawaii, California, Tokyo and New Zealand. In addition, with the advent of the catastrophe options market developed under the Chicago Board of Trade, as well as the development of several weather-indexed catastrophe bond instruments in the reinsurance and investment banking industries, there are a number of innovative tools which could be adapted to the Caribbean context and result in much more optimal risk financing and risk transfer methods for coping with the severity and financial impact of natural catastrophes. The multilateral development bank role in this context would be to support the credit quality of such schemes, as well as organising and/or financing the appropriate technical assistance required.

Application of new insurance technologies

Two financial structures which are fully compatible, both separately or as a unified mechanism, are proposed to address the challenges in the Caribbean. These are briefly described below:

Scheme 1. Liquidity/Credit Enhancement Facility to Support Property Insurance Coverage against Catastrophic Risks

Objectives: (a) To increase the capacity of the insurance industry to absorb and spread such risks; (b) to augment coverage and protect/indemnify against property and business losses; and (c) to reduce the volatility impact of changes in international reinsurance pricing.

Financial structure:

a. The pool/fund would offer only catastrophe coverage to the general public, and would be channelled through local insurers for a management fee (insurance companies, however, could purchase supplementary covers from the world market). The risks, however, would not be reflected on local insurers' balance sheets; they would be liabilities of the fund/pool itself.

b. Catastrophic coverage under the fund is 'reinsured' by international reinsurers up to a specified loss limit.

c. A multilateral development institution provides contingent credit at the next highest loss level, which also supports the liquidity of the pool/fund in the event of immediate large losses in the initial years of operation. Credit is eventually repaid/secured via future premium collections of the fund and, if necessary, surcharges or assessments. The long term loan/credit feature provides optimal risk spreading through time given the relatively long repayment period on the loan terms. This layer of 'cover' also buffers against the impact of fluctuation in international reinsurance pricing, given that loan terms (commitment fee and/or interest charge if used) can remain relatively

stable despite global market movements. Additional reinsurance can be purchased by the fund/pool above this layer as needed.

d. If the fund/pool is majority private owned, the private investment arm of a multilateral development institution could help sponsor a private operator who would manage these pooled risks, but also avail itself of contingent support of the multilateral credit line (transferred on the same terms via the government) for liquidity assurance.

e. Eventually, the liquidity support facility could be borne by the local financial markets with potential support from domestic and international commercial lenders. The multilateral institution would thus catalyse these instruments to allow domestic private sectors to engage in prudent risk spreading arrangements and lower the volatility of future economic losses.

f. In exchange for the government's directing of multilateral institution proceeds to help fund the pool, the premiums collected for the pool would be assessed a minor charge/levy which would be paid into a separate trust fund for future disaster financing of low income households and crop damage to small farmers who were uninsured.

g. With more stable premiums achieved, insurance cover would be compulsory for all middle-income classes and households above a minimum income threshold.

h. Proceeds from premiums received and retained in the fund, as well a the levy for the low-income fund (see above), would be invested in hard currency securities, to accrue additional returns.

As noted, the above structure uses a long-term credit structure to both increase the capacity of catastrophe insurance coverage while cushioning the impact of large fluctuations in international reinsurance pricing. These typically occur following a series of major natural disasters around the globe. Putting in place a multilateral institution supported by a 12–15 year long-term financing mechanism gives the scheme additional flexibility to finance more stable rates over time, because (i) the financed layer does not use reinsurance coverage and thus insulates itself from market movements, and (ii) due to the long repayment period, rates can be kept more stable by spreading out the fund/pool's financial recovery period.

In addition, given the centralisation of catastrophe coverage for the region, this would lead to further equalisation and stabilisation of prices over time. The structure depends on a government/industry partnership, given that the government assumes some minor credit risk by passing on the long-term lending terms to the insurance pool. However, the repay-

ment of the credit would be structured so as to make future premiums and associated savings, a viable and reliable source of funds for such repayment, i.e. no government subsidy is anticipated.

The second instrument proposed for development in the Caribbean region is based on financial pay-outs linked to measurable weather events (or physical parametric triggers). The advantage of these instruments, which can be structured under 'catastrophe bonds', is their relative ease of implementation once a reliable weather measurement mechanism is in place. Thus they bypass the traditional insurance loss adjusting function which requires evaluation of losses on a site-by-site basis before indemnity payment is provided. With parametric or indexed triggers,[1] the payout is simply based on the index or physical parameter having reached a specific level or range, while the premium or spread is fixed in advance.

The main risk with weather indexed instruments is what is termed 'basis risk', i.e. the risk that the basis on which the loss payment is triggered (that is, the weather event such as a high windspeed or excessive rainfall) is not directly linked with the loss experience (for example damage to a specific house or building). In other words, the event indexed instruments can have the risk that (a) payment is made (or the bondholder loses part of the bond payment) when the index is triggered, even though no loss is experienced by the 'insured', or (b) a loss is experienced by the 'insured' party (for example, due to a lower than threshold windspeed) but the index is not triggered so no indemnity/relief is provided.

Given the proximity to the 'damage sites', it is more reasonable to expect that local insurers would take on this basis risk, while international reinsurers would generate the market in these instruments. The burden of the 'local basis risk' could also be shared by government, or alternatively the local insurers could purchase additional insurance to protect against such basis risk. The latter arrangement, however, would br likely to increase the cost of coverage to the ultimate customer, and thus make the scheme less attractive. Catastrophe bonds could also be triggered based on reported

[1]It should be clarified that 'parametric' measures generally refer to physically measurable (parametrised) phenomena such as wind speed, rainfall or earthquake intensity. The term 'index' is usually used in the context of summarising insurance/financial loss data across a certain region or a number of companies in an industry. In the case of temperature degrees, this can also be considered to be a special type of index since the temperature scale is a standardised measure. Similarly, with earthquake events, the Richter scale can be considered as a specialised index reflecting a number of factors contributing to that measurement. For risk securitisation terminology though, direct physical data measurements are normally known as 'parametric', while the term 'index' is generally used for expressing aggregations of insurance dollar losses across a specified sector or region.

losses/indemnification claims in the industry rather than weather indexes.

However, investor appetite might lessen without direct knowledge of local insurance industry characteristics, hence the attractiveness of the easily verifiable weather indexed triggers. The basic elements of such a structure are outlined below.

Scheme 2. Weather Indexed Catastrophe Bonds – Securitisation of Catastrophe Risk

Objective: To establish easily measurable weather indexed insurance/bond contracts which would attract international investors, given the risk-diversifying characteristics these have vis-à-vis global debt and equity markets, while permitting catastrophe risks to be spread into the broader capital markets.

Financial Structure:

a. A multilateral development institution would examine the possibility of sponsoring, with the assistance of international investment and reinsurance companies, the development of 'catastrophe bonds' to be issued on domestic and international capital markets.

b. The bonds, which would pay higher than average yields, have a risk of dropping their coupon rate and principal payments significantly in the event of a catastrophe (such as a hurricane hit or major earthquake) to which bond payments are linked (for example threshold windspeed or earthquake intensity).

c. The multilateral institution would guarantee the payments of the bonds to investors through a partial risk guarantee involving the government and the private bond issuer to ensure liquidity or contractual payments as scheduled.

d. The domestic capital market would list the bonds on international exchanges to further transfer the risk into the global capital market. Since these risks are unrelated to typical stock market or other financial risks, they can prove attractive to international investors and may provide them with additional much-needed diversity in their global portfolios.

e. The bonds would trigger lower coupon interest payments and possibly partial principal losses upon the triggering of key weather events (for example windspeed, earthquake intensity/magnitude).

f. Trigger indicators would involve weather or storm indexes to be tracked via the installation in affected countries of weather station equipment with satellite links to 'recording centres', to track rainfall,

windspeed or other direct indicators of natural disaster adversity factors. These would serve as triggers for payout of such risk linked securities.

Prior to structuring such weather indexed ('parametric') bonds, data on weather events and associated losses would be compiled to ensure that a sufficiently strong correlation was achieved between the index-triggered payment and actual losses based on historical experience. Such data compilation is essential for the structuring and pricing of such insurance contracts. The key element of such contracts' success, however, is the reliability and objectivity of the weather measurement mechanism.

In the Caribbean, the Miami Hurricane (Tropical Prediction) Center provides substantial hurricane tracking data which could potentially be used in constructing the weather trigger source for such contracts. However, if such sources are not sufficiently 'fine-tuned', particularly for small island areas, then a hard installation of 'on-the-ground' wind speed and rainfall measuring equipment may be necessary in the participating countries. Such hard installations would not be very costly, but would require telecommunication/radio linkages (for example via satellite) to a central recording centre to assure objectivity of the data reported.

From a portfolio management viewpoint, international investors would find it desirable to hold some of these instruments in their portfolio in order to diversify the usual financial market risks (i.e. achieve some non-correlation with global markets). While holding such instruments in their portfolio, they would of course be liable for potential losses or yield reduction in the event of a catastrophe. This income (as well as the risk of payout) would be factored into their overall portfolio investment return, though they would have the added assurance that a drop in, say, the world stock or bond markets would have little or no effect on the performance of the catastrophe instruments during the life of the bond.

Combining both schemes in a joint structure and the catalytic role for multilaterals

Due to the complementarity of both of the above schemes, the simultaneous development and feasibility testing of these would be essential, in order to best capture the range of catastrophe protection tools which might be applied in the Caribbean region. This would ensure the design of the most optimal pricing and risk transfer instruments within the limitations that domestic and external markets might bear. The participation of multilateral institutions would be crucial in the initial stages of this work, for the following reasons:

- Given the need for initial collection of economic, financial and loss

information, multilateral support would be essential to ensure objectivity and avoid perceptions of commercial ambitions by interested insurance, reinsurance or investment banking businesses;

- Some form of credit enhancement seems imminent even if a proposed scheme is considered fully financially viable. This is because multilateral institutions' leverage with governments to fulfill contractual commitments under the proposed schemes (for example obligations to insurance companies, investors, trust funds for low income sector recovery and average policy holders) would be a necessary confidence-building measure to assure sustainability and avoid regulatory backsliding in the early years of implementation;
- The proposed schemes would not be likelyto develop until sufficient liquid reserves were build up to protect both the liquidity and solvency of these structures. The multilaterals' longer-term loans are ideally suited to 'protect' the financial integrity of the schemes during the initial years of operation, without causing undue financial stress on their solvency in the event of an early disaster event.

The weather indexed bond can be developed on its own, as well as joining it with the first structure proposed, i.e. the insurance catastrophe pool with the liquidity/credit support layer. In fact, the weather indexed bond can constitute one of the upper layers of coverage in the pooling structure itself. In that manner, an alternative instrument for risk transfer can be added to the catastrophe fund/pool, which would involve investors financing some of the risk and thus further reducing the potential volatility of insurance/reinsurance pricing. In this manner, government properties could also be potentially insured at stable prices, and the local insurance industry could participate in coverage of broader sectors, in part through the use of the weather indexed instruments which could be deployed for hard-to-insure sectors such as small farming or public infrastructure. Besides international investors, domestic banks and capital market institutions could also help to add liquidity to the catastrophe bond market.

Financial support for the creation of these instruments, separately or combined, would also have the objective of reducing the market failures which result in sub-optimal coverage due to heavy fragmentation and scale diseconomies in the Caribbean property insurance market which increases the unfunded liabilities and costs of the industry, and lapses in prudent property coverage due to periodic premium rate hikes passed on by reinsurers (affected both by Atlantic hurricanes as well as other global catastrophe events). The international reinsurance industry would be likely to welcome participation in the form of such capital market/loan

instruments as has occurred in the cases of Hawaii and Florida, as well as corporate specific instruments sponsored by Swiss Re, Residential Re and other reinsurers to better manage and spread such risks.

Determining the cost of financing catastrophic risk

In order to adapt innovative risk financing instruments to cover insurable catastrophe risks, it is necessary to break out the components of such risks. The estimation of the following parameters rely on broad statistical distributions where the applicable coefficients are based on probability ranges using appropriate confidence intervals for specific 'reference event' estimates. The cost of financing catastrophic insurance risk can thus be defined as follows, where:

h = hazard intensity factor (for example hurricane category/windspeed)

f = frequency probability of hazard

v = vulnerability factor of exposed property (structural vulnerability to hazard)

IV = insured value

EPL = estimated expected loss

d = damage ratio (equal to 'h' x 'v')

For example:

Assume that a frequency 'f' of a hurricane in a given territory is once every ten years; this is expressed as 10 per cent or 0.10.

The hazard 'h' is a category 3 hurricane with weight given of 3 (or alternatively a similarly rated earthquake intensity).

The vulnerability coefficient of a given exposed property is 0.10; that is, 10 per cent damage will occur for each level of hurricane (for example 10 per cent damage for a category 1; 20 per cent for a category 2, or analogous damage from earthquake intensities measured on the Richter scale).

Assume that 'IV', the value of the insured property, is $100,000.

The damage ratio 'd' (based on a damage/severity function illustrated earlier) would then combine the vulnerability coefficient 'v' with the hazard intensity 'h', so that:

$$d = v \times h \qquad \text{or in this case } d = 0.10 \times 3 = 0.30$$

meaning that 30 per cent of the property can be expected to be damaged from the hazard of the above cited intensity.

The estimated expected loss (EPL) therefore, would factor in the damage ratio 'd' and the value of the property (IV):[1]

$$EPL = d \times IV = \$30{,}000$$

The annual 'expected' ('EL') average annual loss, or provision therefor, would thus take into account the frequency of the hazard and the EPL figure for the above property (calculated based on acceptable 'confidence' levels of statistical distributions for each hazard level and probability). Therefore:

$$EL = f \times EPL = f \times d \times IV \text{ or}$$

$$EL = 0.1 \times 0.30 \times \$100{,}000 = \$3{,}000 = PP$$

The insurance company would, therefore, calculate a 'pure' premium (PP) of at least $3,000. However, the total premium is based on other factors as well:

$$PT = PP + exp + u + p + R$$

where:

PT = Total Premium (to policyholder);

PP = Pure Premium (as defined above);

exp = Expense component of insurance company (operating expenses, broker fees, business acquisition costs);

u = A risk load/uncertainty factor added to cover against less predictable catastrophic risks or those not fully captured by the above formula/ projection;

p = A company's minimum profit margin/return on investment;

R = A primary insurance companies cost of reinsurance (i.e. premiums paid for reinsurance minus commissions received from reinsurers).

The reinsurance component 'R' is similarly a function of a reinsurer's costs which have a similar cost structure to the primary insurers, albeit with differing risk functions:

$$R = PPr + expr + ur + pr + C$$

where C = commissions paid to primary insurers for passing on premiums to purchase reinsurance cover.

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[1]However, on a portfolio basis, EPL can be significantly reduced since the hazard will not strike all properties in a portfolio in one 'hit'. International reinsurance companies take advantage of this diversity hedge, although Eastern Caribbean countries can also package their own risks and 'sell' them to international reinsurers with this hedge already built in.

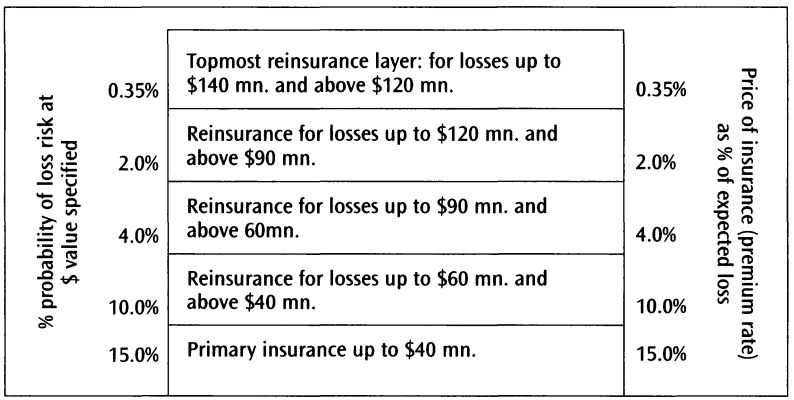
Therefore:

$$PT = (PP + exp + u + p) + (PPr + expr + ur + pr + C)$$

However, the price of reinsurance 'R', as can be seen, is not only based on actuarial projections covering hazard frequency, intensity, and vulnerability and value of insured properties, but also contains 'u', the risk load uncertainty factor which for some reinsurers may simply be a hedge against bankruptcy and a required minimum return on their capital to protect against a miscalculation in the value of the pure premium 'PPr'.

In addition to these factors, the price of reinsurance at the higher excess of loss layers (see Fig. 21) is at times higher in proportion to the risk and chances of reaching losses at those levels. This increase in the 'risk load' appears as a type of price 'stickiness' at those upper layers (which have a lower probability of being reached) and a fact that, even if actuarial estimations yield lower 'pure premium' prices, the reinsurance industry nevertheless may charge proportionately higher in order to cover underwriting expenses as well as the uncertainty spread 'u'.

Figure 21. Larger Risk Spreads in Reinsurance Prices at Higher Loss Layers



This example shows that while the probability of loss at the higher layers of coverage becomes lower (left side of diagram), the premiums charged, while lower at each level, nevertheless decrease at a slower rate. At the upper loss layers with lower probability, the premium becomes proportionately higher from an actuarial viewpoint. This is in part due to the 'uncertainty risk load' which is added to the high loss risk at these levels on top of the standard financial and administrative costs which become a larger share in the total premium. Because of this phenomenon, as well as the potential reinsurance capacity constraints, use of alternative risk financing mechanisms for these event levels, become more feasible.

Applying these observations to the ESC market, the following is set out. Insurance premiums for the ESC are about $149 million per year, but these premiums cover routine losses like fire, as well as catastrophic risk. The average annual insured loss for catastrophes is therefore lower at approximately $90 million, based on the premium allocation of 60 per cent in the region toward catastrophe risk coverage.

The lack of insurance for an estimated 30 per cent of residents is a critical issue for multilateral development organisations. Following catastrophes, disaster aid would be much smaller and could be channelled in more productive ways if more insurance for rebuilding was in existence in East Caribbean nations.

The two major problems in the insurance system for ESC countries are volatility and price. The price and availability of insurance is highly volatile, partly because of factors external to the ESC region.[1]

Use of contingent credit as a reinsurance layer

Capital market initiatives not only include complementing traditional reinsurance with capital market funding, but also the use of risk financing, or credit support. Credit support has the advantage of lower costs if unused (i.e. a commitment charge only), but requires full repayment of principal and interest if used. Because of the latter, most primary insurance companies tend to stay with reinsurance contracts which, while requiring on average higher annual payments of premiums, also provide full 'principal' protection or coverage in the event of a disaster. Nevertheless, where insurance capital capacity constraints exist (such as in the cases of Florida, Hawaii and California), credit instruments can supply that capacity and be repaid via future assessments on premiums. However, in tight insurance markets when premiums are high, the use of credit financing instruments can also be more cost-effective if placed at the appropriate level of coverage. In this regard, the key variables and parameters to consider are the following:

Under the typical reinsurance contract:

R = cost of reinsurance to the primary insurance company;

p = the frequency or probability (same as 'f' as defined earlier) of the hazard event;

EPL = estimated expected loss

and we use the term 'r' to signify the risk free discount rate.

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[1]Marsh and McLennan Securities/Guy Carpenter, 'The Evolving Market for Catastrophic Event Risk', August 1998.

Therefore the expected annual flow to the primary insurer would consist of:

$$\frac{p\,(EPL)}{r} - \frac{R}{r}$$

that is, the expected annual loss (p (EPL)) minus the reinsurance premium R. Both factors are discounted by the risk free rate 'r', used to determine the present value of a perpetual annuity, that is, $R_{Pv} = R/r$. Assuming that both flows (the annual expected loss and the premium payment) can be normalised into a level amount per year, this would constitute a perpetual annuity for valuation purposes. Thus, for the primary insurer, the net present value of the reinsurance contract would be determined by the above (adjusted for secular changes in hazard trends and factors impacting the premium level).

Since the left side of the equation (p(EPL)/r) will remain the same regardless of whether we use alternative risk transfer instruments such as contingent credit or not, then the comparison of the present value of the 'premium perpetuity' (R/r) must be made against the equivalent cost of credit. However, the cost of credit as discussed earlier is asymmetrical depending on whether the catastrophic event occurs or not. For these purposes, we define the following terms:

l_c = the loan commitment fee for maintaining a credit line in standby status;

l_r = the loan interest rate, chargeable upon disbursement of loan principal;

m = the period until maturity of the loan;

i = the i^{th} period of repayment;

Therefore in comparing the cost of credit, taking into consideration the actuarial estimates of catastrophe occurrence, we would express the present value of the annual cost of the credit as:

$$\frac{(1-p)(l_c(EPL))}{r} + p\sum_{i=0}^{m-1}\frac{((l_r(EPL-(i/m)EPL) + l\,(EPL/m))}{(1+r)i} = L_{Pv}$$

r

In other words, in each year, the expected cost of the credit discounted from perpetuity equals the non-probability (1–p) of the event multiplied by the product of the commitment fee and the estimated maximum loss (which in this case is used as the estimate of the required credit amount); plus the probability (p) of the event occurring, multiplied by the present

value of the cost of the credit both in terms of interest and principal repayment. Again, the term EPL is used as the equivalent of the credit amount, and i/m(EPL) is the amount subtracted from principal outstanding each year for the purposes of calculating the interest amount due. Similarly, the term EPL/m reflects the principal instalments payable assuming level payment of principal each year with no grace period. Prior to discounting the entire expression by 'r' given the annual uniform expected 'annuity value', the expression is discounted by each period's risk free rate since each repayment of interest and principal carries with it a different relative present value.

The above principle of measurement is therefore used in this report to determine the cost-effectiveness of using alternative risk transfer and risk financing instruments (L_{Pv} versus R_{Pv}) to complement traditional reinsurance, and in the process obtain a more secure and stable price for coverage which is possible with long-term credit facilities. Using simulations over a 200–400 year period, and assuming a LIBOR cost of financing for credits with a ten-year principal repayment period, risk financing becomes more optimal than reinsurance at specified event probability points. These are further elaborated below, however, for the purposes of testing feasibility, the 200 and 400 year elapsed periods are used instead of the 'perpetuity' since the former is more realistic in terms of 'viable period sustainability'. The reinsurance rates used reflect the current low rates for catastrophe risk – this becomes a very conservative assumption as rates appear to be at a cyclical low, and any increase in rates would result in more favourable outcomes for risk financing instruments.

Applying ESC market data to the insurance model

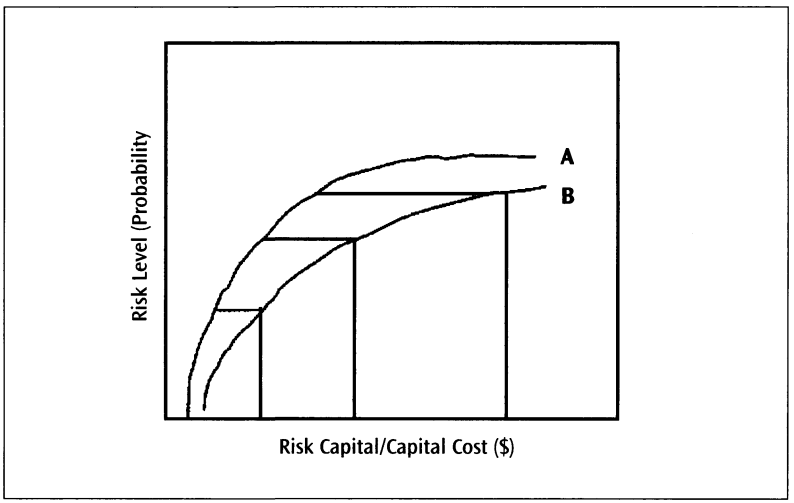
Property rates across the OECS, Barbados, and Trinidad and Tobago vary considerably. This part of the region has three risk sub-zones, with the northern zone (Antigua and Barbuda, St. Kitts-Nevis) considered the higher risk area, the middle zone (Dominica, St. Lucia, Barbados) being medium risk and the southern zone (St. Vincent and the Grenadines, Grenada, Trinidad and Tobago) being the lowest risk zone, particularly in terms of hurricane activity.

Given the differentiated risk zones, sub-regional risk pooling would enable more optimal diversification of risk under a sub-regional insured portfolio which can then be more efficiently transferred to the reinsurance markets and/or the capital markets. Pooling of risks before reinsuring them lowers the aggregate portfolio's single event exposure, thus reducing the capital carrying cost of funding catastrophe risk or, conversely, increasing the available capital for the same level of risk aggregated (see Fig. 22).

Table 13. Primary Insurance Rates for Residential Properties
(Basis points in relation to sums insured, 1999)

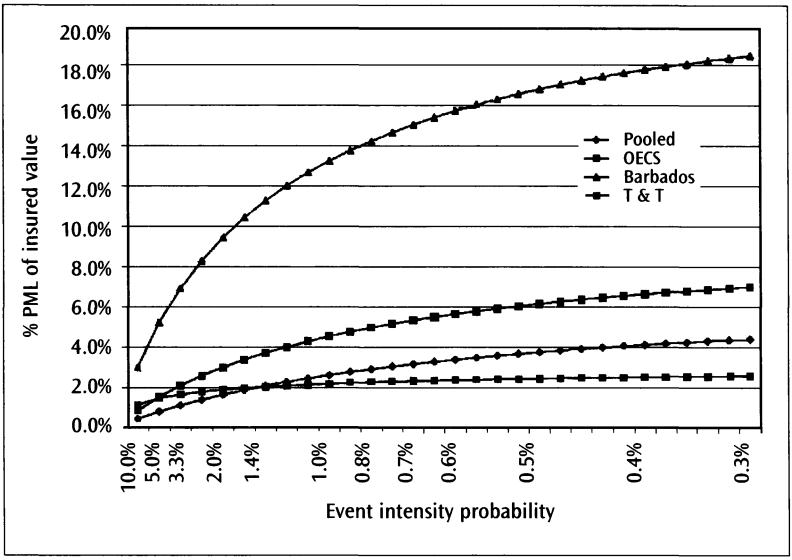
Antigua and Barbuda	120 (high risk)
Barbados	70 (medium risk)
Dominica	70 (medium risk)
Grenada	38 (low risk)
St. Kitts-Nevis	110 (high risk)
St. Lucia	60 (medium risk)
St. Vincent and the Grenadines	40 (low risk)
Trinidad and Tobago	35 (low risk)

Figure 22. Shift in Capital Supply Requirement with Diversified Risk Portfolio



For the three risk sub-zones under a non-pooled scenario, curve B reflects the capital requirement with regard to the three risk level exposures individually. However, under a pooled and further diversified portfolio, the lesser risk capital required to cover catastrophe 'hits' at any point in time over the entire portfolio shifts the required capital supply curve back (curve A). Thus, at the same risk levels shown by the connecting horizontal lines, the risk-based capital needed to fund the fair actuarial catastrophe risks becomes less, reflecting a more efficient funding arrangement.

Figure 23. Effect of Risk Pooling on Loss Distribution Functions



Source: Benfield Greig, Ltd.

Risk pooling

Figure 23 is based on empirical data and shows the reduction in the 'portfolio' expected loss potential, as achieved through pooling of catastrophe risks. The figure is based on data collected on market values of private and public properties and assets, and types of construction in the ESC countries, and applies the historical hurricane intensity distributions and frequencies by individual country and country groupings in order to estimate expected 'portfolio' losses as a percentage of total value, under pooled and non-pooled scenarios. The international reinsurance industry in effect already pools risks at a global level and thus achieves the lowest possible EPL coefficient in order to optimise the use of risk capital. However, while this practice is beneficial at the reinsurer level, it is conversely sub-optimal at the primary insurer level, since proportionately more capital would need to be made available in a smaller, more localised, risk area such as a single hurricane-prone island. In the East Caribbean, EPL percentages are in the range of 15–25 per cent with the average primary insurance company allocating its risk capital based on a 20 per cent portfolio estimated expected loss or EPL. However, as seen above, reinsurers' EPLs are generally below 10 per cent, and even in hurricane-prone states such as Florida in the USA, insurers' calculated EPLs are closer to 5 per cent given the unlikeliness of a major hurricane hitting more than a frac-

tion of the state at one time. The analysis below shows the EPL percentage loss as a function of the probability of various events of differing intensities, with the lowest probability shown to the right of the chart, reflecting an unlikely but very high intensity catastrophe event which corresponds to a higher EPL.

As can be observed from Figure 23, a single country such as Barbados which is rated similarly to medium-risk hurricane-prone islands such as St. Lucia or Dominica, has a much higher potential portfolio loss for all event intensities and probabilities. Even when the six OECS countries[1] which have roughly three risk zones (north EC, mid EC and south EC) with the northern zone being most susceptible to hurricane losses, have their risks pooled under one portfolio, the potential EPL for the group of countries as one 'portfolio' is substantially reduced. Intuitively this is due to the fact that in any given year, the probability of one or more events affecting all of the islands simultaneously, or within an annual time period, is highly unlikely. The pooling of risks to cover the broader region including OECS, Barbados, and Trinidad and Tobago yields yet a lower risk profile for the combined pooled portfolio. The curve for Trinidad and Tobago risk remains the lowest in terms of loss exposure due the extremely low probability of hurricane events affecting that country.

Thus, the pooling of risks initially, before reinsuring them to transfer these risks abroad, has the benefit of requiring proportionately less capital for the same amount of risk, or conversely provides more available capital when moving from a segmented to a pooled arrangement. Additional capital has two benefits. It permits more retention of risk, thus providing more direct premium income to insurers and faster accumulation of capital. Secondly, it permits reinsuring risks at higher loss levels where premium prices under XL contracts are cheaper.

The following section of this paper quantifies the gains obtained from insurance pooling and sets out the financing structure of a regional catastrophe insurance pool supported by alternative risk financing instruments which are tested against the costs and benefits of catastrophe reinsurance contracts. Based on this analysis, the feasibility of establishing a regional catastrophe pool with the participation of the insurance industry and the insurance of government assets, is demonstrated. The use of contingent credit at the uppermost levels of potential loss is also tested in order to provide an optimal combination of retained capital, reinsurance

[1]Antigua and Barbuda, Dominica, Grenada, St. Kitts-Nevis, St. Lucia, and St.Vincent and the Grenadines.

risk transfer, and credit backstop support to finance catastrophic risks more efficiently.

Insurance pooling with alternative risk financing instruments for catastrope risk management

The demonstration from a financial feasibility view of the benefits and sustainability of a regional pooled structure must take into account not only expected claims, but also the income and expense flows of both insurers and reinsurers. In this regard, the proposed pooling approach would increase insurance coverage in the ESC while maintaining or increasing the net income of both insurers and reinsurers, a prerequisite for participation backed by appropriate economic incentives. Since pooling permits increased funding of risk with proportionately less capital, this generates efficiencies in terms of leverage in using reinsurance as well as alternative risk-financing instruments. At the same time, domestic insurers' bottom line is unaffected since the pooled structure allows them to retain additional non-catastrophe risks which permits greater retention of gross premiums collected. From the reinsurance standpoint, transaction costs of reinsurance treaties are reduced and the inclusion of public assets increases their share of coverage while providing more favourable terms due to the proportionately lower reinsurance requirement of the pool. Alternative risk financing instruments, such as credit backstop facilities and catastrophe bonds, are tested, to show that these can positively complement pooled insurance/reinsurance structures by providing cost-effective multi-year coverage which allows stabilisation of pool premiums and available capacity.

Following the quantification of insurable assets at risk, and the actuarially estimated loss exposure parameters on both a pooled and non-pooled basis, the next step is to determine the financing and capital structure of a catastrophe pool which would increase the leverage of domestic capital, while optimising risk transfer and financing arrangements for coverage of disaster losses. In this context, this section starts by estimating the required risk capital for an insurable asset base (including public sector assets), and proceeds to test the feasibility and sustainability of such a pool including the use of cost-effective credit backstop facilities to finance losses at the upper (lowest probability) levels.

The insured assets in the ESC have been estimated to be \$18–\$28 billion. A method for confirming current estimates of the insured value of assets uses the following figures, reported as gross premium for all property insurance classes.

Table 14. Gross Premiums for All Property Insurance Classes by Country

Country	Premiums (US$m)
Antigua and Barbuda	10.6
Barbados	43.0
Dominica	3.8
Grenada	8.6
St. Kitts-Nevis	9.0
St. Lucia	11.9
St. Vincent and the Grenadines	9.6
Trinidad and Tobago	52.1
Total	148.6

Using the weighted average premium rate per sums insured of 0.59 per cent across all the countries listed, the total insured assets for these countries in aggregate are estimated to be $25.13 billion which, based on independent value estimates, would represent the high end of the range of total market values of properties in the region.

The average Estimated Expected Loss (EPL) ratio of 20 per cent of total values insured for the region ($25.13 billion) would thus imply an insurance liability funding requirement (premium reserves plus capital and/or supplemented by reinsurance) of $5.03 billion.

A catastrophe pool, however, would only attempt to cover the 'cat' portion of the risk which pertains to 60 per cent of the total coverage based on the premium breakdown. However, before applying this portion of the risk, one must take into account the reduction in EPL provided by the pooled structure. As the previous analysis shows, the Barbados/OECS/Trinidad and Tobago pooled structure would provide an aggregate portfolio EPL of only 5 per cent, given the diversification of risk and annual expected losses of the pool as a whole, versus expected losses for individual countries (based on historical frequency event and loss data). Therefore, the above estimated funding requirement of $5.03 billion adjusted for the 60 per cent 'cat' portion would amount to $3.02 billion. If, however, one utilised the pooled EPL of 5 per cent over the aggregate of $25.13 billion adjusted for the 'cat' portion, this would result in a net insurance capital requirement of 25.13*0.60*0.05 = $0.75 billion or $750 million.

The difference between the higher EPL estimated capital requirement of $3.02 billion minus $0.75 billion equals $2.27 billion in surplus available capital on account of pooling. Since the current practice is to reinsure

under proportional treaties a share of approximately 70 per cent of gross written premiums, as well as another 20 per cent of the remaining 30 per cent reinsured under XL contracts, this results in a typical net retention by primary companies of (100%–70%) – 20% = 24%. Thus, if reinsurance arrangements under the pool were the same as for the local industry, this would result in a minimum pool retention of $0.180 billion (24%* $0.750 billion), or a reduction 'saving' of $0.545 billion versus the non-pool retention amount of $0.725 billion (for catastrophe risks only).

Under the non-pooled situation, the retention after using XL cover, or 24 per cent net, would have been referenced to the 'cat' portion of coverage of $3.02 billion, that is, the $725 million of the retained requirement which would be required under current practices. However, the 'risk savings' of $545 million in net capital on account of the lower EPL in the pool can also be used for additional primary risk retention. Thus total risk retention under the pooled scenario could amount to $0.725 billion instead of $0.180 million ($0.725m – $0.545m = $0.180m) without an increase in risk but with the potential to take on increased insurance coverage. The additional capital at the retained pool level would not only imply additional gross premium income (without a reinsurance cost), but would also permit faster accumulation of pool reserves.

Primary insurers in the region could still benefit from an available increase in the retention of 'non-catastrophe' risks, in an amount at least equal to the $0.725 million transferred to the pool for 'cat' risk. Any 'non-cat' retention beyond that level would accrue as additional gross premium income at a rate of $PT_i*(1 - C_{nc})$, where PT_i is the incremental gross premium collected, and C_{nc} equals the percentage commission which would have been received if the risk had been ceded to reinsurers. As described further below, the retention of 'non-cat' risks and associated premiums can be increased substantially given that, in the absence of catastrophe risks on the balance sheet, this presents companies with significantly more manageable insurance liabilities.

An additional benefit of higher risk retention by primary companies is that using less protection at the more frequently used lower levels of cover, would shield them from international rate fluctuations which at those layers have more frequent impacts on company balance sheets since those such layers of coverage are invoked more often.

Under the above scenario, therefore, ceding the catastrophe risk of primary companies to a pool, would increase the capital leverage of the pool and result in more efficient reinsurance arrangements. However, mechanisms would be needed to ensure that cession of the 'cat' risk would not result in lower overall financial results. This can be achieved via two

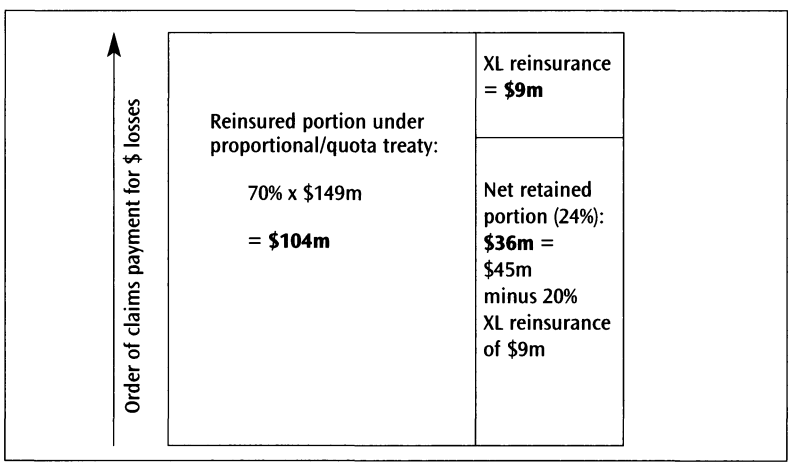
Table 15

(US$ billions)	Pre-Pool Scenario	Pool Scenario
a. Total sum insured	25.3	25.3
b. Gross premium	0.149 (0.59% of 'a')	0.149
c. Estimated expected loss	5.03 (20% of 'a')	1.265 (5% of 'a')
d. Catastrophe portion	3.02 (60% of 'c')	0.75 (60% of 'c')
e. Capital requirement	3.02 (= $d_{(i)}$)	0.75 (= $d_{(ii)}$)
f. Pool capital saving	—	2.27 ($e_{(i)}$) – ($e)_{(ii)}$)
g. Net retained capital	0.725	0.180 to 0.725
h. Percentage of 'cat' risk	24% ($g/d_{(i)}$)	24–97% ($g/d_{(ii)}$)

instruments: (a) replacing some of the reinsured non-cat risks with additional risk retentions; and (b) expanding the 'non-cat' risk portion of the underwritten portfolio (for example by underwriting residences, small commercial and public sector assets). In addition, it would be expected that primary insurers would still receive commissions on their 'cat' risk premiums transferred to the pool, although the commission rate might vary given that cession to the pool would imply a direct transfer of risk versus reinsurance proper. Nevertheless, primary companies would still be expected to service policy holder accounts and thus a reasonable commission would be warranted.

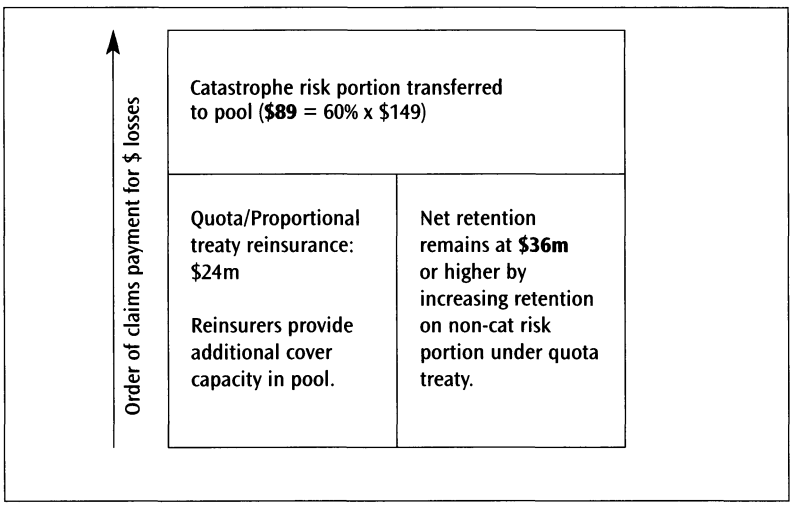
The existing underwriting arrangements (pre-pool) reflect the insurance/reinsurance structure shown in Figure 24.

Figure 24. Insurance/Reinsurance Premium Structure of the Eastern Caribbean, Barbados, and Trinidad & Tobago ('cat' and 'non-cat' risks)



By ceding the *catastrophe* portion of the initially retained premiums (i.e. \$27m = 60% x (30% x \$149 mn.)) of the total before XL reinsurance, this would leave a remainder of \$18 million of retainable premium for the primary insurers. Since XL cover would no longer be necessary (as the 'cat' risk would be handled by the pool), the primary companies would end up with a resulting retained portion for all risks of \$18m = \$45m – \$27m, as oppposed to \$36 million in the present situation (Fig. 24). However, the reduction from ceding the 'cat' risk (which would nevertheless still provide some commission income) could be 'compensated' by reducing the remaining 'non-cat' risk currently reinsured under the quota treaty, and increasing the corresponding retention (see Fig. 25).

Figure 25. Insurance/Reinsurance Premium Structure after Ceding Catastrophe Risk to Pool and Reducing Remaining Proportional Reinsurance



Inclusion of public sector assets and other uninsured properties

In addition to restructuring catastrophe insurance arrangements as shown above, primary companies can also augment their 'non-cat' portfolio by insuring public sector assets and currently non-insured households, assuming a supportive regulatory framework for compulsory catastrophe insurance protection. Estimated public sector assets, uninsured households and small businesses in terms of total value are shown in Table 16.

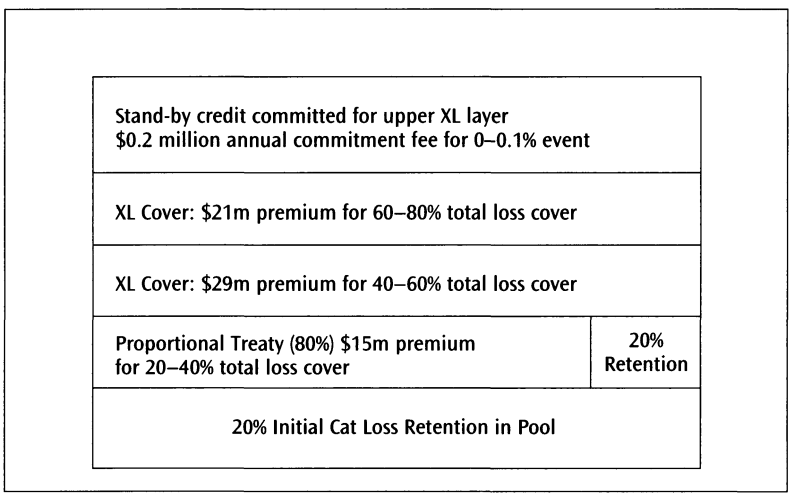
Government assets include public buildings, government buildings, utilities, ports, airports, roads, schools, hospitals and other public sector assets. Adding in the above assets totalling almost \$6.3 billion and using an

Table 16. Estimated Public Sector Assets and Uninsured Households and Businesses

	Government assets (US$m)	Uninsured households/ businesses (US$m)
OECS	2,172	414
Barbados	836	298
Trinidad and Tobago	2,161	350
Total	$5,169	1,062

average but conservative premium rate of 0.6 per cent of insured value would result in additional premium volume of $37 million of which the catastrophe portion would constitute $22 million and the 'non-cat' portion $15 million. Assuming transfer of all catastrophe risks to the pool, the following premium structure would result (Fig. 26).

Figure 26. Insurance/Reinsurance Premium Structure after Ceding Catastrophe Risk to Pool and Adding Government Assets and Non-insured Homes



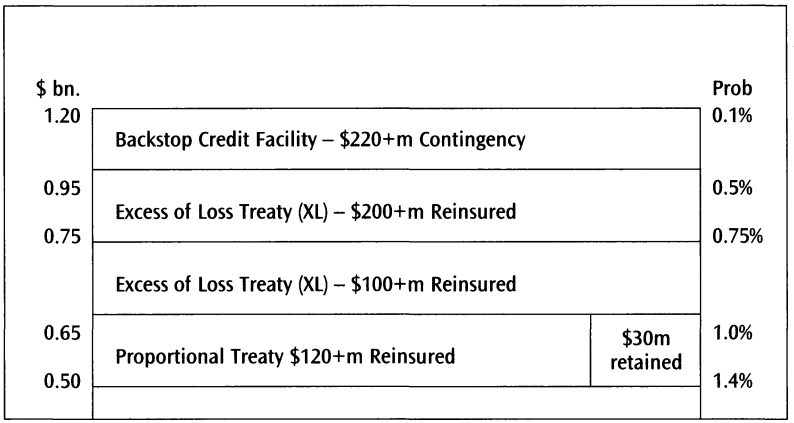
Under the above arrangement, primary risk retention would increase to 60 per cent since this reflects purely 'non-cat' risk. Table 17 shows the financial results for insurers and reinsurers alike for the transition from current arrangements to the proposed insurance premium structure using the pool for catastrophe risk cover.

Table 17. Results of Proposed Insurance Premium Structure for Insurers and Reinsurers (figures in $m)

Current situation		**Initial pool**		**Final pool**	
Quota reinsurer	104	Quota reinsurer	24	Quota reinsurer	30
Primary retention	36	Primary retention	36	Primary retention	45
XL	9	Pool	89	Pool	111
	149		149		186
Income – Primary Insurer		**Income – Primary Insurer**		**Income – Primary Insurer**	
Re. commissions		Re. commissions/rates		Re. commissions/rates	
Non-cat comm.	0.33%	Non-cat comm.	33.0%	Non-cat comm.	33.0%
Cat comm	0.22%	Cat pool comm.	15.0%	Cat pool comm.	15.0%
		ROL 40–60% layer	4.5%	ROL 40–60% layer	4.5%
Non-cat comm.	13.73	ROL 60–80% layer	3.5%	ROL 60–80% layer	3.5%
Cat commission	13.73				
Net premium income	36.00	Non-cat comm.	7.92	Non-cat comm.	9.90
Total	63.46	Cat pool comm.	13.35	Cat pool comm.	16.65
		Net premium income	36.00	Net premium income	45.00
		Total	57.27	Total	71.55
Income – Reinsurer		**Income – Reinsurer**		**Income – Reinsurer**	
Premium – commiss.	76.54	Premium – commiss.	16.08	Premium – commiss.	20.10
		Pool quota re 20–40	12.10	Pool quota re 20–40	15.10
		Pool XL (40–60%)	23.08	Pool XL (40–60%)	28.78
		Pool XL (60–80%)	16.89	Pool XL (60–80%)	21.07
		Total	68.16	Total	85.05

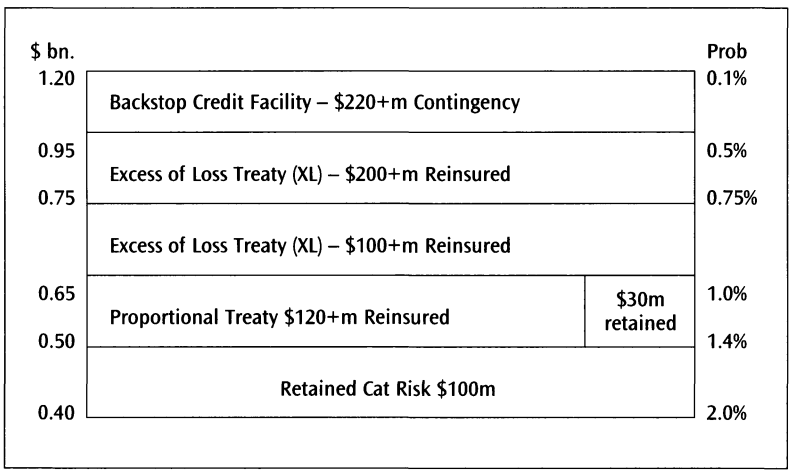
The total income increases for both insurers and reinsurers in the final pool structure, on account of higher 'non-cat' retention by primary insurers and additional reinsurance coverage provided by reinsurers under the pool. Commissions and reinsurance prices used are shown in the 'Re. commissions/rates' section. For the pool structure, the reinsurance arrangements used assume a structure whereby the first 20 per cent cover is retained in the pool, the second 20 per cent uses a proportional quota treaty with 20 per cent co-insurance, and the third and fourth 20 per cent layers use XL coverage. The last 20 per cent layer is assumed to be funded via a backstop credit line. Table 17, therefore, shows the elements of insurance income which affect the respective parties under each of the structures shown. As the pool builds up funds, the retained capital rises accordingly. The implied pool structure, in terms of premium distribution, would thus be as follows (see Fig. 27).

Figure 27. Implied Pool Structure for Allocating Catastrophe Risk Premiums



The consequent distribution of funding mechanisms by the corresponding loss levels is shown in Figure 28.

Figure 28. Implied Pool Capital Structure for Financing Catastrophe Losses



Since the retention level is substantial and amounts to a 'deductible' for any particular event, this layer can be structured in separate 'cylinders' per country so that each country's exposure has the same benefits of the pool structure for its proportion of the retention.

Figure 29. Structure of $100 million Retention Layer by Country



Thus, for example, if St. Lucia's portion of the retention layer was $10 million, and the country suffered a loss totaling $30 million, it would be eligible to collect $16 million from the pool. This reflects $20 million above its retention minus the 20 per cent co-insured retained portion under the proportional treaty reinsurance layer.

At the initiation of the pool, the annual premium income would be $111 million less 15 per cent commissions which equals $94 million. Reinsurance premium costs to the pool would amount to $67 million ($15m + $29m + $21m + $2m loan commitment fee). However, on the proportional treaty, the $15 million of premiums ceded would accrue a commission to the pool which assuming a 15 per cent rate would provide an additional $3 million. Therefore, the pool's initial annual income would amount to $97 million, leaving a surplus of $30 million to cover administrative costs and to accumulate reserves (see Table 18). It should be noted that the XL reinsurance premiums have been 'conservatively' estimated at rates which are actuarially fair but are three times the current market rates, to take account of potential future price fluctuations and potential variations in the estimated expected loss percentage. Therefore a significant cushion exists for additional savings if these 'adverse' events do not develop. Nevertheless, since the pool assumes a retention of at least $100 million in 'cat' risk, this amount would be required as initial capital. This could be provided by private sector shareholders, strategic investors or other means.

Defining a catastrophe pool for public assets

While the above analysis has combined both public and private sector assets in the pool structures as defined, governments could also choose the option of establishing a purely government pool to insure public assets and infrastructure. While such a pool would have less capital than the combined private/public pool, it could nevertheless be considered as an option if inclusion of private insured assets proved to be unwieldy or less desirable to the domestic insurance industry even if it implied no reduction in net income flows. Figure 30 shows a potential structure for a sub-regional government insurance pool, together with the financing role of

Table 18. Resulting Financial Income and Expenditure Flows for Pool
(US$m)

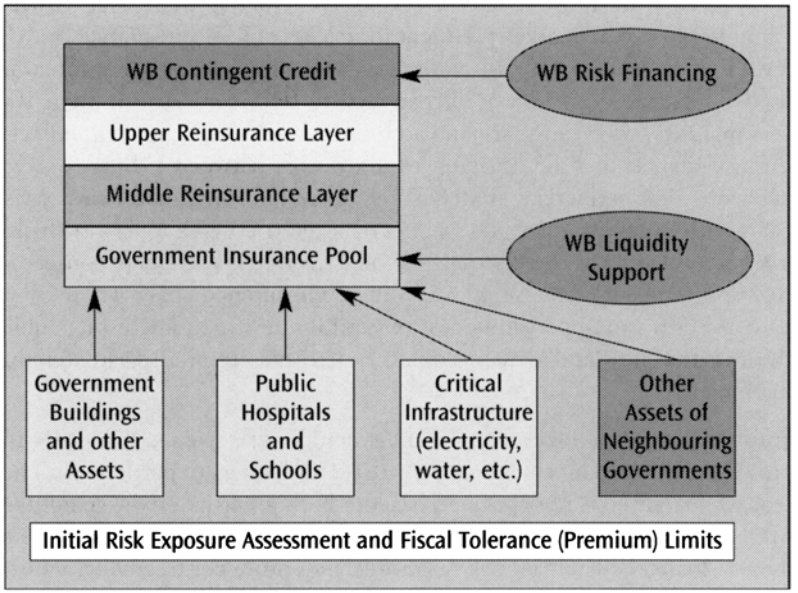
Financial Income	
Catastrophe premiums received collected from primary insurers	111
Commissions from reinsurers (under quota share treaty)	3
Total	114
Financial Expenses	
Commissions paid to primary insurers	17
Net quota share premium paid	15
XL first layer premiums	29
XL second layer premiums	21
Credit commitment fee	2
Total	84
Net income/flow	30

multilaterals in order to assure initial liquidity for the pool and provide a topmost layer of excess-of-loss protection in case of a major catastrophe event.

The pool described would follow the same financial structure of the industry/public assets pool described above. The assets included in the pool would be government buildings and properties, schools, hospitals and critical infrastructure facilities such as electricity and water transmission systems. A key aspect to consider in a public asset insurance pool is each government's tolerance for the payment of premium from its fiscal budget. Therefore, such a structure would first need to determine the level of premium 'subscriptions' for a specified range of assets, commensurate with the affordability constraints and risk management objectives of each government.

An additional feature of a government assets pool would be the provision of a low layer credit line from the World Bank or other multilateral agencies to protect the pool from losses if they occurred early in the cycle before the premium build-up provided a sufficient capital cushion to absorb risks before reinsurance layers were invoked. This lower end protection becomes more feasible in a government versus a private sector pool since the credit line becomes a public 'general' liability, while in a private sector pool such a liability at the lower layer could constitute too high a debt burden for corporate statutory standards. However, in the public sector case, since losses at the subsequent layer would be covered by reinsurance, the debt burden is strictly limited to the difference between available capital for 'retained' risk and the required full retention amount before the reinsurance could be invoked.

Figure 30. Outline of an Insurance Pool Structure for Public Assets



The structure also includes a top layer risk-financing facility as in the private sector pool, which would only be invoked at the lowest probability event levels which generated losses above the last reinsurance layer. As will be shown below, such financial instruments prove to be more cost-effective in the long run than adding an additional topmost reinsurance layer, since they cost little or nothing when not deployed, and they allow repayment over a long period when used and this can be funded by future premiums.

Results obtained from testing risk transfer and risk financing mechanisms

This section provides the methodology and results for testing viability of alternative risk transfer mechanisms for financing catastrophe risks. Capital market products such as loans of different maturities and pricing (commercial, IBRD, IFC) were tested for specified event probabilities and compared with existing available reinsurance pricing. Commercial loan financing was tested using credit enhancement instruments such as the IBRD Guarantee which was also used to test viability of catastrophe bond products for capital market issuance.

Event scenarios at the 5 per cent probability level (reflecting relatively frequent but less loss intensive hazards) were first tested over a 200-year

simulation period using IBRD loan terms of 15-year maturities and five years grace at an interest rate of 6.5 per cent (above the current IBRD variable rate). The market premium for excess of loss reinsurance at this level is 7–8 per cent of the loss layer covered, though a 7 per cent rate was used. The same exercise was also applied to IFC loan terms using a 10-year maturity, two years grace and an interest rate of 10.5 per cent, reflecting the high end of IFC pricing which ranges between LIBOR + 2 to LIBOR + 4. Commercial credits were also tested using maturities of six years with one year grace at 11 per cent interest cost. A 5 per cent risk-free rate was used as the discount factor. This rate is extremely conservative and tends to bias results in favour of reinsurance cover when compared to using an opportunity cost of capital rate which might be double the risk-free rate and which would tend to bias results towards credit instruments.

For commercial financing, an IBRD guarantee was assumed in order to provide credit enhancement for private sector lenders to participate. The type of guarantee is not specified because both a partial credit guarantee would apply (for example to ensure a minimum maturity period of the loan or loans) or a partial risk guarantee (to ensure contractual commitments on the debt service obligations). In both the cases of risk transfer (reinsurance) versus risk financing (lending), the net present values for the 'insured' were negative, that is, after taking into account the indemnity payments received following a disaster, the policy holder or primary insurer would not 'profit' from the coverage, which is consistent with the use of insurance for protecting against cash flow shocks and drastic reductions in asset wealth. The results are shown in Table 19.

These results show that in present value terms, the cost of utilising IBRD financing would, over a 200 year period, constitute only 60 per cent of the conservatively estimated cost of reinsurance for the specified level of risk. As seen, however, for both IFC and commercial lending (the latter including a small guarantee fee of 0.70 per cent), the long-term cost is substantially higher in present value terms (1.4 and 2.0 respectively). The second ratio shown attempts to demonstrate during any given period of using loan proceeds, what the ratio of debt service (P+I) would be during such period versus having used and paid reinsurance premiums. Such a ratio is useful to determine the level of reserves needed at any time to ensure sufficient liquidity and solvency to repay the required debt service. Table 20 shows a 400-year simulation period for an event probability of 1 per cent (i.e. less frequent but potentially of much larger loss magnitude) using the same financing terms as above, except that the corresponding reinsurance premium at that level would be 4 per cent of the loss coverage layer, given the lower probability of use.

Table 19. Testing Alternative Risk Financing Instruments: IBRD, IFC and Commercial Loan Terms using 5 per cent Catastrophe Event Probability

	Reinsurance	IBRD terms	IFC terms	Commercial
Simulation period	200 years	200 years	200 years	200 years
Event probability	5%	5%	5%	5%
Premium Rate	7%			
Interest Rate	n.a.	6.5%	10.5%	11.0%
Commitment fee	n.a.	0.75%	0.5%	1.0%
Front end fee	n.a.	1.0%	1.0%	1.0%
Maturity/grace	n.a.	15/5	10/2	6/1
Guarantee fee	n.a.			0.7%
Financial Results				
PV Cost Ratio: Financing/Reins.	1.0	0.6	1.4	2.0
Ratio of: avg. debt service/Premium	1.0	1.9	2.5	3.5

The second scenario provides a much more favourable cost/benefit outcome in terms of relative PV costs of using financing versus reinsurance. An additional benefit would be the absence of volatility in the 'reinsurance' rate due to preset financing terms. For this purpose, the IBRD loan facility has the additional option of being converted to a fixed rate loan following disbursement through a currency swap/conversion agreement which, under current IBRD policy, would only charge a 0.125 per cent fee. At a LIBOR rate of 5.6 per cent, for example, and IBRD's loan spread of 0.55 per cent, the total cost before fixing the rate would amount to 6.15 per cent. The additional fixed rate cost plus the transaction fee would raise this rate higher, so the 6.5 per cent rate used in the simulation is reasonable and within expected bounds. In addition, the commitment fee assumed is 0.75 per cent while present waivers only require a 0.25 per cent fee payment currently and in the foreseeable future.

As can be observed, when the lending proceeds are used (1 per cent probability), the relative debt service ratio compared to reinsurance premiums is much higher than in the first scenario with 5 per cent probability, and if the loan repayment were annuitised, it would be equivalent to a 13 per cent rate on line. The main reason for this is that, at the 5 per cent probability level and leaving the loan terms unchanged, the premium itself is substantially higher (7 per cent instead of 4 per cent) and therefore the relative debt service ratio in the first case appears more favourable. However, even if this were not the case, there exists another key problem

with engaging risk financing at the 5 per cent probability level. At 5 per cent event probability, the excess of loss reinsurance cover represents a low to middle layer cover among the possible layers of cover. At this level, this constitutes a key segment of the XL reinsurance market and therefore using credit facilities, particularly at favourable terms, could constitute market interference. It is therefore not recommended, unless private commercial parties are willing to provide financing at terms similar to IBRD, to engage credit financing for catastrophe risk at the 5 per cent probability layer.

Table 20. Testing Alternative Risk-financing Instruments: IBRD, IFC and Commercial Loan Terms using 1 per cent Catastrophe Event Probability

	Reinsurance	IBRD terms	IFC terms	Commercial
Simulation period	400 years	400 years	400 years	400 years
Event probability	1%	1%	1%	1%
Premium Rate	4%			
Interest Rate	n.a.	6.5%	10.5%	11.0%
Commitment fee	n.a.	0.75%	0.5%	1.0%
Front end fee	n.a.	1.0%	1.0%	1.0%
Maturity/grace	n.a.	15/5	10/2	6/1
Guarantee fee	n.a.			0.7%
Financial Results				
PV Cost Ratio: Financing/Reins.	1.0	0.2	1.3	0.4
Ratio of: avg. debt service/Premium	1.0	3.5	4.8	6.5

However, the same argument does not apply to the 1 per cent probability layer. This is because the highest (least likely), but potentially more destructive event probabilities, is where the global reinsurance market can experience capacity/supply crunches as occurred following Hurricane Andrew in 1992. These upper levels are precisely where the 'cat' bond market has developed, since additional 'capacity' in the capital market exists at these levels. Thus, a more promising use for alternative risk financing and credit enhancement instruments would be at the highest, but least probable, loss levels which pose inherently risky scenarios for insurers and reinsurers alike. Based on the current insured loss exposure for the OECS, Barbados, and Trinidad and Tobago under a pooled structure ($750 million), the backstop credit financing requirement would amount to $150 million based on the 20 per cent upper level currently reinsured under XL contracts in the region.

However, since the debt service usage under such scenarios implies much higher cash flow requirements (3.5, 4.8, 6.5 as multiples of reinsurance premium for IBRD, IFC and Commercial terms respectively), any such entity, pool or fund using such instruments must have within its financial structure sufficient initial capital to cover the required debt service even if long-run costs are lower in PV terms. The latter fact, however, provides the possibility of accumulating reserves at a faster rate so that initial extra capitalisation might only need to ensure coverage for the first instance of loan use.

Nevertheless, because of the higher debt service costs at the 1 per cent event probability level in relation to reinsurance premium, the case still needs to be made to determine if use of credit at such levels is indeed more cost-effective not only from a cost/benefit viewpoint, but also from an annual operating scenario. To do this, the 'savings accumulation' factor was calculated based on the lower cost of using credit in the long run, but also taking into account how quickly those 'savings' accrue before the debt service comes into play. Table 21 illustrates the results of this calculation.

Table 21. Accumulation of Additional Reserves using IBRD Loan Facility to Compensate for Higher Debt Service Costs at 1 per cent Probability Assuming Mean EPL

	Savings from loan facility as percentage of previously paid premiums under reinsurance contract – 100-year period	Ratio of accumulated premiums paid versus debt service under using loan facility per 100-year period
a. Savings accumulation in PV terms immediately before 1 per cent event	81%	5.3
b. Savings accumulation in PV terms immediately post 1% event, before debt serv.	82%	5.6
c. Savings accumulation in PV terms, post event and after debt servicing costs	81%	5.2

The table shows, as in the earlier analysis of differential present value costs, that the savings from using a standby credit facility are sufficient to accumulate at a rate which compensates for the periodic higher debt service payments using a loan facility. Since under the IBRD option, the

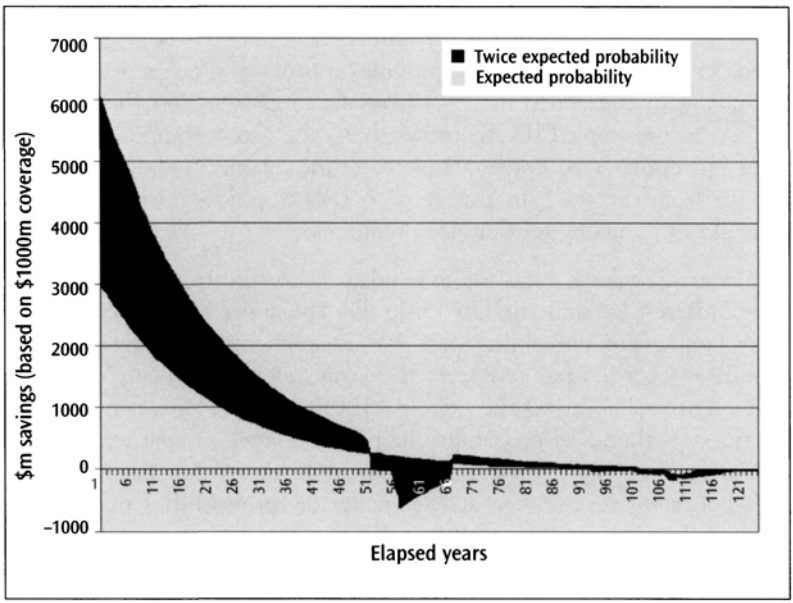
ratio of debt service to premium was 3.5, the level of savings should be sufficient to build up reserves to pay for eventual loan servicing costs even after including other incidental costs such as administrative expenses. In comparison to the percentage standard deviation of catastrophe reinsurance prices in the last decade, the savings accumulation rate exceeds that significantly, which means that the savings more than compensate for the higher debt service costs (compared with reinsurance). Since the savings accumulation provides the necessary funding in disaster years, and since the loan facility maintains a stable cost of financing, this facility effectively reduces the volatility in reinsurance pricing (such reinsurance pricing also rises after major disasters, as discussed previously).

It should be clarified that the above figures assume a constant premium rate for the XL coverage at the 1 per cent risk layer. However, as documented earlier, rate volatility is inevitable and by historical standards, 1998 and 1999, the years upon which the reinsurance rates are based in this exercise, is one of the lowest rate periods in the last decade for the East Caribbean market. The use of credit financing swapped into fixed rates at the highest loss layers would therefore lock in more stable rates. In this context, multilateral institutional support could only be considered as a catalytic function since permanent support for such a scheme would be expected to be borne by the private markets. It should also be clarified that given the risks that the 1 per cent probability occurs 'early' in the expected cycle, the pool would need to be adequately capitalised initially in the event that the distributions of actual catastrophes become more concentrated than the mean values suggest. The use of debt in this regard has to be measured against the future repayment capacity taking into account the need for adequate initial reserves to accommodate early occurring events.

To test a more severe scenario, the probability of the catastrophic event was set at double its actuarially estimated frequency so that use of the credit would be twice as frequent over the 400-year simulation period. In this case, even though the 'savings' rate diminishes, the initial accumulation is still sufficient to more than compensate for the cost of debt service following the event. Figure 31 shows the difference between savings under the mean expected probability scenario and a scenario with a 100 per cent increase in probability.

In Figure 31, the 'expected probability' (1 per cent) shaded area is of the same magnitude as the 'twice expected' series area except at periods in which the 'twice' series requires additional use of debt service. In such cases, the savings become negative. However, even with this worse case scenario, the initial accumulation of savings (v. reinsurance costs) is more

Figure 31. Incremental PV Savings: Credit v. Reinsurance Cost



than sufficient to offset the 'dip' years. Therefore, provided that the savings obtained are maintained in a trust or investment account (rather than used for expenditures or paid out as dividends), they would maintain the credit-based cost of reinsurance at a low rate and continue allowing protection against exogenous rate-related volatility.

Eventually, credit support would need to be borne by the commercial market which, as shown above, could represent savings of up to 60 per cent in long term premium costs based on a 1 per cent actuarially based event projection. The build-up of additional reserves from such savings would also lower the capital 'stress' caused by debt service repayments during 'event' years and this could potentially be ameliorated further by extending the maturity and/or lowering the interest rate further supported by additional credit enhancement mechamisms.

Feasibility of using catastrophe bonds as reinsurance

The use of catastrophe bonds to support reinsurance capacity for a pool is also considered. At the outset it should be mentioned that catastrophe bonds usually require a number of preparation costs which can amount to 1–2 per cent or more of the issuance value. These costs pertain to bond underwriting costs and cover the legal expenses, setting up of special pur-

pose vehicles and trusts, ratings analysis, investor marketing costs and other necessary costs as part of the capital market-based transactions. For multi-year bonds, however, these costs can be amortised. If well structured, catastrophe bonds can provide another source of reinsurance capacity with the added benefit of having rates based on the financial markets (for example LIBOR) rather than on global reinsurance capacity alone. In contrast to contingent credit lines, bond coupon interest is payable from the start. In this respect, catastrophe bond payments are more akin to ongoing reinsurance premiums.

As already discussed, catastrophe bonds to date require an above-market rate of interest for similarly rated risks. For the upper XL layers under the 1 per cent event probability, 'cat' bonds are being currently priced at LIBOR + 4 (or 9.6 per cent). At the layer below (for example 1–2 per cent event probabilities) the price is LIBOR + 5.5 (11 per cent). While for investors the lower probability (upper loss) levels are more attractive, given that they imply lower 'default' possibilities, for the 'insured', using such bonds for reinsurance at extremely low probabilities may not be worthwhile since the rate will not necessarily be lower commensurate with the risk (due to the fixed costs of issuing the bond). Bonds which do not protect the principal from loss in the event of a catastrophe that generates losses above the attachment point are priced substantially higher than those which have principal protection.

In the case of a pooled catastrophe insurance structure for the East Caribbean, it is assumed that credit enhancement support would be required to assure a successful bond issuance for purchase by international investors. A World Bank guarantee for this purpose would add a 0.7 per cent annual fee to the cost. Therefore, assuming that a catastrophe bond would be used for reinsurance cover at the 0.6–1 per cent probability level, the total cost to the pool would be LIBOR + 4.7 or, at current rates, 10.3 per cent, substantially higher than an equivalent reinsurance premium. However, as discussed above, the proceeds of a catastrophe bond are to be invested in a trust account in risk-free securities. The current US treasury bill rate is approximately 4.9 per cent. Thus, this investment would offset the 'cat' bond financing costs by that amount and would provide an approximate net cost of 5.4% = LIBOR + 4.7–4.9. So underwriting fees – assumed to be an additional one-off expense of 2 per cent – have been excluded.

If we use the 'cat' bond form of reinsurance for a $100 million loss limit, the total annual coupon payment 'premium' or rate-on-line equivalent would amount to $5.4 million, and the first year underwriting fee would be $2 million. In the financing structure of the pool listed earlier, a rein-

surance premium of $21 million as a maximum was estimated, even though the current market rate-on-line for the same would be $3.5 million, i.e. below the 'cat' bond net interest payment. Therefore, based on the projected financial income and expenditure of the pool, a 'cat' bond would still be affordable as an alternative method of reinsurance.

As discussed earlier though, investors might only be receptive to purchasing such instruments if the loss trigger was clearly defined and transparent. The current loss adjustment process and determination of indemnity payments in any given country might not be perceived as information which is symmetrical in its availability to both the investor and the insured. Because of this, a parametric trigger to determine the claim's eligibility is proposed as the only feasible option, even though this can generate potential basis risks. Nevertheless, with significant modelling based on hazard intensities at given sites and related dollar losses, a determination of the basis risk could be made. This would require use of meteorological measurements of windspeed and/or earthquake in islands which have suffered from disasters.

For improved 'payment triggering' under a catastrophe bond arrangement, heavy-duty wind measuring devices, for example, could be purchased and set up in selected spots on each island participating in the pool. These could be connected via wireless transmission to a central database administered by the pool, as well as to an independent body such as the Miami Hurricane Center. Once an above threshold wind measurement was recorded, this would serve as the basis for declaring a prespecified 'loss payment' from the bond, i.e. the bond proceeds would be used to indemnify for affected damages, in which case the investors would lose part of their principal and future interest.

While it would theoretically be possible for the pool administrators, in conjunction with the domestic insurers, to report exact losses on the ground, and thus allow the 'cat' bond's loss on its principal be pro-rated accordingly, the institutional infrastructure for developing such a reporting system would not only take substantial time to implement but, as mentioned above, might not be attractive as a reporting system to the bond investors. Therefore, loss payments from 'cat' bond proceeds might be structured parametrically as shown in Figure 32.

The hazard event would need to be measured at that level for a specified time (for example 60 seconds or more) at one of the pre-defined sites. The loss of principal and interest, however, would only apply to that portion of the loss pertaining to the country or countries affected. Thus, as in the pool structure shown above, if a category 5 hurricane hit only one country which represented 10 per cent of the total pool exposure, then the loss of

Figure 32. Structure of Loss Payments from 'Cat' Bond Proceeds

Hazard Intensity Threshold	Investor Loss on Bond for Indemnification
Category 5 Hurricane Earthquake Richter 7.5	80% of Principal 1.5% on Interest
Category 4 Hurricane Earthquake Richter 6.5	60% of Principal 1.0% on Interest
Category 3 Hurricane Earthquake Richter 5.5	40% of Principal 0.5% on Interest

the 'cat' bond's principal would be 0.1*(80 per cent), or 8 per cent of face value.

An additional feature that might be built into a catastrophe bond contract is a swap agreement to convert LIBOR-based interest payments into fixed rate payments so as to maintain rate stability for the insured and the SPV during the life of the bond. This would also add to the initial funding costs but, as earlier discussed, would still be affordable based on the pool financials. Therefore, in the catastrophe bond instance under such arrangements, a cost versus variance trade off would need to be examined further to determine whether the higher financing costs might indeed offset rate volatility in the reinsurance markets.

Investors have proved to be receptive to catastrophe bonds despite their apparent riskiness. Nevertheless, when compared to similarly (or lower) rated securities in the financial markets, their return versus risk profile is actually much more favourable. Table 22 shows the relative characteristics of catastrophe bonds with certain attachment probabilities along with other rated securities.

In addition to the higher return/risk profile that many catastrophe bonds can offer investors, they also improve the investors overall portfolio risk given that catastrophe bond performance is not linked to global financial market prices, since they are based on natural event triggers versus economic/financial factors. Thus, besides the benefits of higher returns, the lack of correlation of 'cat' bond performance with the broader financial markets, improves the efficient investment frontier (see Fig. 33).

The addition of cat bonds to a portfolio of assets with significant global price correlation, would reduce expected portfolio volatility due to the risk diversification aspect of cat bond returns versus global financial market returns (for example US markets, European markets, emerging markets, in fixed income securities or equities). Thus an equivalent portfolio rate of return can be achieved with a lower risk profile (curve A) compared to a similarly valued portfolio before adding uncorrelated cat bond securities (curve B).

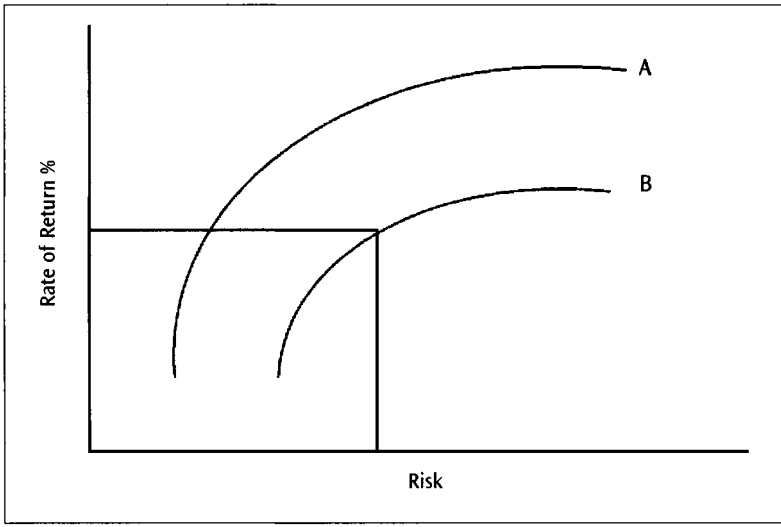
Table 22. Comparison of Default Rates on 'Cat' Bonds versus Other Bonds

	Bond default probabilities (or equivalent catastrophe event probability) (%)	Spread above LIBOR (%)
Below Investment Grade Bonds		
Ba2	0.60	1.10
Ba3	2.70	1.36
B1	3.80	1.84
B2	6.79	2.00
Principal at Risk Cat Bonds		
Res Re '97	1.00	5.76
Parametric	1.02	4.30
Trinity	1.53	4.36
Res Re '98	0.87	4.00
Principal Protected Cat Bonds		
Res Re '97	1.00	2.73
Parametric	1.02	2.06
Trinity	1.53	1.49

Source: Goldman Sachs

In conclusion, it should therefore be stated that a number of configurations and options for managing catastrophe risk exist, and these can exploit recent development in risk transfer instruments as well as different capital structures for managing and holding sufficient catastrophe reserves. The structures presented previously for deployment in the ESC case represent what is seen as the most applicable and least complex to implement given the financial participants, country situations, and affordability constraints, particularly in terms of fiscal resources available for the payment of insurance premium.

Figure 33. Change in Efficient Investment Frontier from Inclusion of 'Cat' Bonds in Portfolio Risk



However, in the process of developing a risk management framework for an intra regional group of countries, the risk exposure, insurability and pricing characteristics may vary once data are collected based on actual conditions and level of resolution used. Such an exercise may well point to alternative structures and funding mechanisms for assets at risk which may need to be seriously considered as additional choices.

This paper has attempted to show, however, that under reasonable and conservative assumptions, the case for improved risk management by using a package of policy and financial instruments in the ESC area, can prove to be a valuable policy tool to improve long-term development prospects of such nations, as these periodically suffer the devastating effects of natural disasters.

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Impact on Small States of the Developing World Trade Regime

Small Economies in the WTO[1]

Peter Tulloch

The Geneva Ministerial Declaration and its follow-up

The Geneva Ministerial Declaration of 1998 states that Ministers 'remain deeply concerned over the marginalisation of *least-developed countries and certain small economies*, and recognise the urgent need to address this issue which had been compounded by the chronic foreign debt problem facing many of them'.[2]

The issue of small economies was first raised in the World Trade Organisation (WTO) by Bolivia in a discussion in March 1997, prior to the High-Level Meeting on Least-Developed Countries' Trade Development. Bolivia, while appreciating the efforts made by international organisations in co-operating to better integrate LDCs into world trade, suggested that the results of the meeting should be applied to other countries with small economies, including land-locked economies.[3]

Mauritius took up the issue in the Intersessional Committee of the WTO General Council, as part of the preparatory process for the Seattle Ministerial Meeting. It was then raised in the Committee on Trade and Development in November 1998, with the circulation of a paper jointly sponsored by Barbados, Jamaica, Mauritius, Sri Lanka, and Trinidad and Tobago.[4] Bolivia, Cuba, Dominica, Dominican Republic, El Salvador, Guatemala, Haiti, Lesotho, Malta, Nepal, Nicaragua and Sri Lanka associated themselves with the ideas expressed. Barbados, Fiji, Guatemala, Lesotho and Mauritius also circulated papers describing their experiences as small economies.

The joint paper referred to the vulnerability of small economies, the inadequacy of per capita income as a measure of the level of development, and the proposition that a vulnerability index should be used to assess the developmental levels of small economies. Small economies were seen as vulnerable because of: (i) natural features such as their demographic structure, the availability of economically exploitable land, their vulnerability

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[1]This is a revised version of the paper presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London, February 2000.

[2]WT/MIN(98)/DEC/1, paragraph 6.

[3]WT/COMTD/M/14.

[4]WT/COMTD/W/50.

to natural disasters and their geographical location; (ii) considerations such as their small internal markets, problems of realising economies of scale because of the small size of the economies and small size of firms, difficulties in ensuring effective and developed infrastructure and efficient provision of government services, heavy reliance on a few commodities and a few overseas markets and consequent instability of export earnings, high transport costs stemming from cartel-like activities of carriers and small volume of goods transported, and consequent constraints in pursuing economic diversification programmes; and (iii) other elements such as high dependence on trade taxes for revenue, limited domestic savings capacity and difficulties in attracting Foreign Direct Investment (FDI), a high share of public sector expenditure in GDP, high per capita costs in establishing basic infrastructure and a shortage of 'critical mass' in the economy.

In terms of specific trade-related proposals, the paper suggested that preferential trade agreements had partly compensated for the lack of comparative advantage of small economies, and that it would therefore be difficult to contemplate the easy integration of small economies into the Multilateral Trading System if preferences were removed abruptly. The authors also pointed to a link between the existence of trade preferences and the attraction of FDI into small economies, a need to improve telecommunications links with small economies to enable them to take advantage of the electronics revolution in communications, and the high cost for small economies of the WTO Dispute Settlement procedures.

In discussions in the Committee on Trade and Development, although some initially expressed concerns about the overlap between 'small economies' and least-developed countries, there was increasing support for the small economies' paper. The importance of structural features of small economies such as size, trade concentration and consequent vulnerability to external shocks, and the crucial importance of market access, were emphasised. Some support was expressed for the use of a vulnerability criterion in applying 'special and differential' treatment to small economies, in addition to LDCs, and a proposal was made that the concept of 'small economies' be further refined to determine its fit with the WTO rules-based system. Some industrialised member countries also supported the arguments presented by the small economies in seeking ways to overcome marginalisation, particularly through increased and more focused technical assistance to enable them to participate in the multilateral system, and the importance of preferences.

Definitional issues

Developing countries in the WTO are a self-defined group, without particular reference to any policy question. Special characteristics, interests

and concerns of various groups of countries, other than 'developing countries' or 'least-developed countries' are, however, identified in some of the WTO Agreements, for example net-food-importing developing countries and developing countries affected by the growth of illicit narcotic crops in the Agreement on Agriculture, developing countries whose per capita GNP is below US$1,000 in the Agreement on Subsidies and Countervailing Measures, and small textile and clothing suppliers and cotton and wool producing or exporting countries in the Agreement on Textiles and Clothing.

The only clearly identified group of developing countries acepted as such by WTO Members as a whole is the least-developed countries as defined according to the criteria used by the United Nations. Twenty-nine of the 48 LDCs are currently WTO Members. The fit between LDCs and the 'small state' grouping defined by the World Bank and Commonwealth is highly imperfect; only four of the 29 LDCs that are WTO Members are 'small states' while nine of the WTO Members that have raised the issue of 'small economies' in the WTO setting are not identified as 'small states' according to the World Bank/Commonwealth criteria (Bolivia, Cuba, Dominican Republic, El Salvador, Guatemala, Haiti, Jamaica, Nicaragua and Sri Lanka).

In addition, it must be said that there is still a certain doubt among WTO Members, both developed and some of the larger developing countries, concerning the need for special consideration for small developing economies, and it is felt that the case has not been fully established. This is one reason why a number of developing countries have called for a work programme on the subject before the Fourth WTO Ministerial Meeting (see below).

One method of identifying a group of 'small, vulnerable' developing economies among the WTO membership might be to relate them to their scale of payments of contributions to the WTO budget, which is based on the share of Members in world trade.[1] In the 1999 WTO budget, 50 Members were liable to pay the minimum subscription of 0.03 per cent of world trade. Forty-nine of these Members were classed as least-developed countries, 'small states' as defined by the Commonwealth/World Bank, and/or Highly Indebted Poor Countries (HIPCs) in IMF/World Bank terminology. Extending the contribution level to 0.05 per cent would add seven more 'small states', and to 0.1 per cent, an additional three (Table 1).

[1]This issue is discussed in Commonwealth Secretariat/World Bank (1998) 'The Trade Policy Implications for Small Vulnerable States of the Global Trade Regime Shift'.

Table 1. WTO Members Paying the Minimum Contribution of 0.015 per cent of World Trade in 2000

Antigua and Barbuda*†	Madagascar††
Belize*†	Malawi††
Benin††	Maldives*†††
Burkina Faso††	Mali††
Burundi††	Mauritania††
Central African Republic††	Mongolia
Chad††	Mozambique††
Djibouti*†††	Myanmar††
Dominica*†	Niger††
Gambia*††	Rwanda††
Grenada*†	St. Kitts and Nevis*†
Guinea††	Saint Lucia*†
Guinea Bissau††	St.Vincent and the Grenadines*†
Guyana*†	Sierra Leone††
Haiti††	Solomon Islands††
Kyrgyz Republic	Suriname*†
Lesotho*†††	Togo††

* = 'High Vulnerability' in the Commonwealth Vulnerability Index
† = 'Small State' according to Commonwealth/World Bank criteria
†† = Least developed country according to the United Nations

Steps proposed and taken in favour of small economies

In their statement to the Committee on Trade and Development in July 1999, the representatives of the World Bank and Commonwealth Secretariat proposed four steps that might be taken by WTO Members in respect of small, vulnerable states. These were:

- to recognise that small vulnerable states face difficult challenges in making the necessary adjustments to multilateral trade liberalisation and achieving a sustainable threshold of development sufficient to free them from dependence on aid and trade preferences;
- to streamline and accelerate procedures for accession to the WTO;
- to establish arrangements that will ease the legal costs of using the Dispute Settlement Mechanism for small states;
- to lower the subscription fees of small states to the WTO.[1]

[1]Statement by Sir Humphrey Maud to the Committee on Trade and Development, 7 July 1999.

Challenges to developing countries, including small states

The challenges that developing country Members face in adapting to conditions of multilateral trade liberalisation can be addressed in the WTO Agreements through their provisions for special and differential treatment. These fall into five main groups: provisions aimed at increasing trade opportunities, provisions that require WTO Members to safeguard the interests of developing country Members, flexibility of commitments, transitional time periods, and provisions for technical assistance.[1]

Among the first group are measures falling under the 'Enabling Clause' (preferences under the Generalised System of Preferences (GSP), regional agreements among developing countries, and special preferences for least-developed countries) or under waivers (for example for Lomé IV, preferential arrangements for the Caribbean by the United States and Canada, or a recently agreed waiver permitting more advanced developing countries to extend duty-free preferences on a non-reciprocal basis to LDCs).[2] The second group includes provisions for taking account of special interests of developing countries in Agreements such as those on Technical Barriers to Trade (TBT), Anti-Dumping, Subsidies and Safeguards. The third group allows for lower levels of WTO commitments by developing countries than by others (for example in tariff bindings or agricultural export subsidies). The fourth relates to greater flexibility in time periods for implementation of WTO Agreements by developing countries. And the fifth provides the overall framework for technical assistance by the WTO and its Members to developing countries for capacity-building. Specific special and differential treatment provisions for least-developed countries are contained in the Enabling Clause of GATT 1994, provisions relating to non-reciprocity in trade negotiations in GATT 1994 and the General Agreement on Trade in Services (GATS), in Article 24 of the Understanding on Dispute Settlement, and in the Agreements on Agriculture, Subsidies, Trade Related Aspects of Intellectual Property Rights (TRIPS), TRIMs and the Application of Sanitary and Phytosanitary Measures (SPS). Generally, special and differential treatment is judged to be applicable according to the level of development or specific problems of the Member; however, there are specific cases identified in certain Agreements, as noted in the paper referred to above.

The scope and application of 'special and differential' treatment and of other developmental considerations has for long been under discussion,

[1]See High Level Symposium on Trade and Development, March 1999, background paper by the WTO Secretariat.

[2]W2T/L/304, 17 June 1999.

although without any particularly definite outcome, in the Committee on Trade and Development and in the WTO General Council pre-Seattle discussion.

Accession

The length and complexity of accession procedures has long been recognised by WTO Members. An initial response to this challenge has been the identification of practical ways and means capable of facilitating accession processes, particularly through special technical assistance efforts by the WTO Secretariat and the active movement of Chairpersons of particular Accession Working Parties, notably those relating to 'small economy' island states. The 1997 High-Level Meeting on Least-Developed Countries recommended the WTO to further develop its efforts to assist least-developed countries in the process of accession to the WTO.

The issue was taken up by the former Director-General in a statement to the WTO General Council on 15 June 1999, made on the basis of his consultations with all Chairpersons of Accession Working Parties. In his statement the Director-General emphasised *inter alia* the roles of Members in the smooth functioning of the accession process, of Chairpersons of working parties in smoothing the concluding stages of negotiations, the need for terms and conditions of accession to uphold the integrity of the WTO system, and the urgent need of all acceding governments for focused technical assistance.[1]

Attempts were also made to bring this issue into discussion in the Seattle Ministerial Conference (see below).

Dispute settlement

Although the Dispute Settlement system is recognised to be valuable, effective and central to the legal rules established in the WTO, many concerns have been expressed about the costs of the system for developing countries. An initiative has been taken by a number of WTO Members to establish an 'Advisory Centre on WTO Law', independent of the WTO Secretariat, whose task would be to complement the training and technical assistance already provided by the WTO Secretariat (which is required to be impartial) and provide legal advice to developing countries and economies in transition. Users of the Centre will be charged fees in accordance with their membership status in the Centre and their ability to pay. Least-developed countries, and founding members of the Centre,

[1]WT/GC/W/212, 17 June 1999.

would pay no subscription and receive free advice in consultations up to a certain number of hours per year; for least-developed countries (but not for other developing countries, including small economies that are not LDCs), the fees for assistance during legal proceedings would also be heavily discounted (10 per cent of normal rates).

The Centre was successfully launched in Seattle, at the time of the WTO Ministerial Conference, and is expected to be fully active by 2001, subject to ratification by national Parliaments.

Minimum contribution

The issue of the minimum contribution to the WTO has been actively pursued by LDCs and other small economies in the Committee on Budget, Finance and Administration and the Committee on Trade and Development. These efforts have borne success; for the budget year 2000, the minimum contribution has been reduced to 0.015 per cent of world trade in goods and services. Most of the 47 WTO Members touched by this change are least-developed countries (Tables 1 and 2). However, 13 Members classed as 'small states' by the Commonwealth and World Bank benefit.

Table 2. WTO Members Paying Between 0.015 and 0.03 per cent in Budget Year 2000

Barbados	Namibia
Bolivia	Nicaragua
Cameroon	Senegal
Congo††	Swaziland
Democratic Republic of the Congo††	Tanzania††
Fiji*†	Uganda††
Namibia	Zambia††

* = 'High Vulnerability' in the Commonwealth Vulnerability Index
† = 'Small State' according to Commonwealth/World Bank criteria
†† = Least developed country according to the United Nations

Proposals to the Seattle Ministerial Conference

Two sets of proposals were made to the third WTO Ministerial Conference in Seattle on the issue of marginalisation of small economies. The first, by Barbados, Dominica, Fiji, Grenada, Jamaica, Lesotho, Mauritius, Papua New Guinea, Solomon Islands, Saint Lucia and Trinidad and Tobago,[1] recalled the specific factors making small economies vulner-

[1]WT/GC/W/361, 12 October 1999.

able and leading to comparatively higher costs of production and distribution on the world market for small economies and the vital role played by preferences under the GSP and under CBI, CARIBCAN, and the Lomé Convention. It proposed that the WTO Secretariat should prepare a consolidated list of products of export interest to small economies and that all developed markets should extend duty free access to products of export to small economies. The proposal also suggested that regional trade agreements should be encouraged as part of the process towards successful integration of small economies into the world market.

In relation to the Agreement on Agriculture, the proposal suggested that, because of the particular vulnerability of small economies to price and supply fluctuations, higher fixed costs of production and marketing, and susceptibility to natural disasters, future rules should provide for measures at international level to assist small economies whenever they are adversely affected on account of any natural disaster, and to diversify into products which have greater potential for higher value to be added. In addition, WTO Members should take steps for the rapid implementation of the Decision on Net-Food-Importing Countries and: give priority consideration to future agricultural trade liberalisation to market access for small economies' products; to the provision of technical and financial assistance by major agricultural exporters and development institutions to improve agricultural productivity; and to make concessional facilities available when food prices exceed a particular ceiling or when domestic food production drops below a certain level.

In relation to the Agreement on Textiles and Clothing, the small economies proposal sought the provision of concessional loans by the World Bank and other financial institutions for upgrading, rationalising or rehabilitation of their production units, and the provision of technical assistance for the adaptation of production to changing trends in designs and fashions and for marketing.

A particular emphasis was placed in the proposal on the high share of tariff revenues in the budgets of small economies and the harmful results of tariff reduction on Governmental budget balance. It was seen as 'imperative' that small economies should be granted necessary flexibility to reduce tariff levels, in keeping with what they considered necessary for their balanced development and sustained growth, the competitiveness of their products and sustaining their developmental momentum. The proposal sought also to embody in the rules a principle that small economies should not be required to make further commitments to reduce tariffs and to bind reduced rates beyond what they consider consistent with their trade, development and financial needs; and that the level of tariff reduc-

tions should, *inter alia*, be based on individual assessment of their effective capacity to apply trade remedies such as anti-dumping and safeguard measures.

The document also contained requests for greater flexibility to be applied to small economies in the WTO rules on subsidies and a higher *de minimis* level in relation to the application of countervailing duties and safeguard measures. In relation to services, the proposal emphasised the importance of Article IV of GATS, relating to increasing participation of developing countries, and sought priority in new negotiations for the removal of barriers in sectors of export interest to developing countries; extension by developed markets of incentives to improve the access of small economies to technology, distribution channels and information networks, particularly through electronic commerce, and concrete capacity-building measures to assist their services sectors.

A second, highly focused submission to Seattle by Jamaica and Mauritius[1] proposed six principal areas where trade rules should be adapted in favour of small developing economies: transitional trade preferences; longer transitional periods for trade liberalisation in small economies; concrete measures to address food security in small economies that are also net food-importers; assistance with modernisation of sectors such as textiles and clothing, on which countries may be heavily reliant for employment, income and foreign exchange earnings; more flexible arrangements for the establishment of regional trade agreements; and higher subsidy thresholds for the application of countervailing measures. The paper also proposed that the Committee on Trade and Development should elaborate a Work Programme to address the constraints faced by small economies and make recommendations to the General Council for adoption before the Fourth Ministerial Conference.

The text that was carried forward to Seattle stated in the preambular section: 'We give particular emphasis to the need to ensure that developing countries, *and particularly the least-developed and vulnerable small economies*, secure a share in the growth of international trade commensurate with the needs of their economic development'. It continued: '. . . we take note of the problems and concerns facing economies in transition and the vulnerable situation of certain small economies and instruct that these be given due priority in the WTO work programme', and 'we . . . direct that all possible efforts be made to accelerate the process of accession, and in particular for least-developed and small economies'. Other references to 'small' or 'vulnerable' economies occur in the sections on textiles, implementation of the Agriculture Agreement, reinforcement of technical assistance efforts, developmental objectives of proposed trade

negotiations, assistance for participation in negotiations, small *island* developing states (in the proposals for negotiations on agriculture), and, finally, in a proposal for a work programme in the Committee on Trade and Development, as requested in the proposals submitted, 'to identify concrete measures for the fuller integration of small economies into the multilateral trading system, and to make recommendations for action to the General Council before the end of the year 2000'.

With the failure to make any agreement at Seattle, all proposals are currently on hold. WTO Committees and Councils, including the Committee on Trade and Development, are currently considering their work programmes for the year. Conditions for technical assistance for least-developed and small economies have not improved as hoped. Work must begin in 2000 on the 'Built-in Agenda' of negotiations on agriculture, services and aspects of TRIPs; however, it is too soon to say under what conditions and parameters these will begin, and in the absence of agreement on a round of negotiations it is not clear what time-frame may be set for their completion. Again, in the absence of agreement in Seattle on extensions, time periods have now expired for the application of certain WTO Agreements (notably, TRIMs and Customs Valuation) by developing countries, except those that have requested extension of the period for examination of their TRIMs, and the only security against the calling of such measures into dispute is the good will expressed in the General Council Chairman's statement on 17 December 1999.[1]

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[1]At the meeting of the General Council held on 17 December 1999, the Chairman made the following statement:

'As I have proposed, this meeting of the General Council will be adjourned and resumed as early as possible next year to take up item 3 of the Agenda. It is my understanding that the question raised by a number of delegations concerning the provisions which lapse and deadlines which expire on 31 December of this year will be part of the consultations to be continued. The General Council will therefore revert to these matters when it resumes early next year.

'It is understood that all Members will exercise restraint on the matters under consultation so as not to prejudice further fruitful discussion and decisions on these matters, or the position of other Members.

'Members have made it clear that informal consultations are necessary on a wide variety of issues, including the issue of deadlines. Many Members urged understanding by all Members in those consultations, and they urged due restraint on the part of Members. This approach would be without prejudice to the position on rights and obligations of Members.'

Trade Policy Implications for Small Vulnerable States of the Global Trade Regime Shift[1]

Roman Grynberg

Summary

1. Summary of Conclusions

a) Trade Regime Shift

The shift in the global trade regime resulting from the proliferation of regional free trade arrangements, the closure of the Uruguay Round and the creation of the World Trade Organisation (WTO) has resulted in a process of trade liberalisation that is eroding the trade preferences of small vulnerable states.

The trade liberalisation benefits of the Uruguay Round are unevenly distributed, have small negative impacts on African, Caribbean and Pacific (ACP) states and adversely affect many small vulnerable states that are net food importers and highly trade preference dependent.

The European Union's preferred choice as a way of resolving the WTO compatibility of the trade provisions of the Lomé Convention is the creation of regional free trade agreements. This, as a result of ***the web of implicit Most Favoured Nation (MFN) obligations*** *in the other regional trade preference arrangements, such as the Caribbean Basin Initiative (CBI), the Canadian Preferential Arrangement for Commonwealth Caribbean Countries (Caribcan) and the South Pacific Regional Trade and Economic Co-operation Agreement (Sparteca), will result in a fundamental* ***systemic change*** *to the global trade regime. This change will mean that regional trade preference regimes will eventually disappear and be replaced by Generalised System of Preferences (GSP) arrangements.*

The EU's negotiating mandate for the post-Lomé trade framework arrangement now goes well beyond issues of WTO compatibility to cover market access and the so-called 'new issues' proposed by developed WTO members for the 'Millennium Round' of multilateral trade negotiations.

Any possible WTO incompatibilities that may exist between the Commodity Protocols of the Lomé Convention and Articles XIII(c) and XVI of the GATT

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in St. Lucia in February 1999.

cannot be resolved by the creation of free trade areas. Instances of waivers from such obligations are exceedingly rare in the history of the GATT/WTO.

b) Adjustment Problems of Small Vulnerable States
The economic qualities needed to adjust to an open trading environment include the following:

- *a pool of freely traded and specialised land, labour and capital;*
- *an efficient information system that disseminates relevant market information rapidly and at low cost;*
- *physical infrastructure that permits an efficient movement of goods, services, resources and persons;*
- *a social and political infrastructure conducive to predictable legal outcomes.*

Small vulnerable states, along with other developing countries, suffer from ***policy-induced*** *as well as* ***exogenous*** *causes of their relative inefficiency. The* ***cluster of exogenous qualities inherent in many of them*** *makes the adjustment process of small vulnerable states particularly difficult. These qualities are well known and include:*

- *diseconomies of scale in production for both domestic and export markets;*
- *physical dispersion of small pockets of resources, products and persons (especially in island states);*
- *physical isolation from resource and export markets;*
- *a lack of trade and economic integration, permitting the acquisition of domestically scarce resources at competitive market prices;*
- *poor development of human resources, especially of skilled labour and entrepreneurial skills;*
- *poor physical and communications infrastructure;*
- *a high degree of vulnerability to the economic impact of natural disasters.*

As a result of high cost structure caused by exogenous factors, small vulnerable states, especially in the Pacific, have had to base their economic development on quasi-rent generating sectors.

c) Small Vulnerable States and the WTO
Small states and small producers are implicitly recognised in a number of ways at the WTO:

- *the Agreement on the Interpretation of Article VI (Anti-Dumping) through the* de minimis *volume provisions;*

- *an implicit WTO definition of 'small', as recognised in the Finance Committee of the WTO, which sets 0.03% of world trade as the minimum for purposes of subscription;*
- *special provisions for small producers in the Agreement on Textiles.*

Attempting to gain political recognition at the WTO for small vulnerable states will be ***politically difficult*** *and there will be resistance to this from least developed, developing and developed WTO members.*

Significant economic benefits to small vulnerable states would ensue from receiving special and differential treatment equivalent to those given to Least Developed Countries (LDCs). These include:

- ***Protection of trade preferences*** *under the Lomé Convention. Such special and differential treatment (SDT) would obviate the necessity for regional free trade areas with the EU in the Caribbean and the Pacific;*
- ***Exemption from Subsidies Disciplines****, which are necessary for economic transformation.*

Obtaining special and differential treatment will necessitate a simple definition that excludes small, high-income anomalies such as Iceland, Liechtenstein and Luxembourg. Solely demographic definitions of small vulnerable states are dysfunctional in a WTO context.

2. Summary of Recommendations

a) Post-Lomé Arrangements

In Brussels negotiations for post-Lomé arrangements, ACP states should avoid negotiating disciplines that can be construed as 'new issues', for example trade and labour standards, trade and competition, trade and investment. Negotiations should focus only on technical assistance needs of ACP states in these areas.

ACP states that are not members of the WTO should not be bound by any post-Lomé arrangement to disciplines that they have not accepted multilaterally.

The framework agreement should contain ***a regional MFN provision*** *for the regional free trade agreement, under which any general, as opposed to commodity-specific, market access or trade benefit negotiated in one region would be extended automatically and without negotiation to the others. This would help ensure ACP solidarity on trade issues, while allowing regional commodity specific arrangements.*

The defence of WTO incompatibility of the commodity protocols through waivers is unlikely to meet with success.

If ACP states accept the regional free trade area concept, they should negotiate

at the WTO special and differential provisions for the Interpretation of Article XXIV. This should make allowance for longer transitions (20 years or, if possible, an unspecified duration of transition) in the event of a free trade area between developing and developed countries.

b) Interventions to assist Small Vulnerable States deal with global economic liberalisation

The international community could assist small vulnerable states to adjust to the realities of a more open global trading environment through a policy that attacks both policy-induced and exogenous sources of inefficiency. The interventions should include:

- ***market-oriented** reforms through structural adjustment (World Bank/IMF);*
- *technical assistance for **niche market development** (UNCTAD/ITC);*
- *a market-friendly **investment preference facility** for the replacement of trade preference (IFC/World Bank) (see Annex 2);*
- *enhanced **Special and Differential Treatment** for Small Vulnerable States (WTO).*

c) WTO Issues

Defining 'small vulnerable states' at the WTO

*To find an appropriate definition of 'small vulnerable states' as a basis for obtaining special and differential treatment equivalent to LDCs at the WTO will require a definition that avoids high-income anomalies. The problem of small states is economic and an economic definition, based possibly on **a share of world trade**, may prove to be the politically easiest definition to agree on, as it is already accepted. Such a definition would require a **secondary criterion**, that the WTO member be a developing country.*

The current implicit definition of 0.03 per cent of world trade, which is accepted by the WTO, will create few anomalies but will exclude certain key Commonwealth small states, for example Papua New Guinea, Jamaica, Botswana and Mauritius. If the figure is raised to 0.05 per cent these will all be included but more high-income anomalies result.

*Should small vulnerable states decide to pursue special and differential treatment at the WTO, then **LDC-equivalent status** would be an optimal outcome. However, any recognition of smallness could bring significant economic benefits. This objective could be achieved directly through the WTO during the next round of multilateral trade negotiations or through obtaining recognition of the vulnerability index through the UN Economic and Social Commission (ECOSOC).*

***Political marginalistion** of small vulnerable states inside the WTO requires*

a recognition that they are at present unable to operate on an entirely equal basis with larger developed countries. Several measures are needed:

- ***The membership fee floor** should be lowered from 0.03 per cent of world trade to a floor corresponding to the UN General Assembly floor (0.003 per cent of world trade)*
- ***Accession** is extremely difficult because large WTO members see each accession as a precedent for large states such as Russia or China. In the case of LDCs and small vulnerable states, the protocol negotiations – dealing with internal reforms to assure WTO compatibility of the trade regime and a timetable for reform – should be established by a **committee of experts** and based upon recognised development status of the applicant. Bilateral negotiations should be limited to **principal suppliers** only.*
- *The **dispute settlement mechanism** of the WTO should recognise that LDCs and small vulnerable states are unable to make use of it because of the high legal fees. A **legal aid fund** should be established. In the event of a dispute between an LDC or a small vulnerable state and a developed WTO member, the developed WTO member should accept **binding arbitration for financial compensation** rather than retaliation if the transgressor is unwilling to bring its trade into conformity with its WTO obligations.*

*During the **Millennium Round** small vulnerable states should:*

- *Reject the proposal for **'round-ups'** or short rounds as these decrease the bargaining power of small vulnerable states;*
- *Avoid plurilateral agreements on goods or services liberalisation at the WTO, as they weaken the bargaining power of small states;*
- *Accept the inevitable demise of agricultural systems such as the EU's Common Agricultural Policy and the US sugar regime by 2010, and **seek negotiated financial assistance for the adjustment process**. Many small vulnerable states, those that do not benefit from agricultural quotas into the EU and the USA, would benefit from agricultural liberalisation in certain key sectors;*
- *Since the new round of multilateral trade negotiations will focus also on service sector issues, small vulnerable states should begin to focus upon sectors where they are exporters. Small vulnerable states are very often exporters of semi-skilled labour and receive considerable economic benefit from the remittances of their nationals. One important but politically sensitive issue is the establishment of **rights of temporary sojourn of unattached service providers, i.e. semi-skilled workers** in developed country markets. This could be dealt with by **bound annual quotas**.*

Introduction

The purpose of this paper is to review the trade policy implications for small vulnerable states of the change in the global trade regime. The change that has occurred in the early and mid-1990s has undoubtedly been the most dramatic change in the trade environment facing small vulnerable states since their independence. The intention of the paper is first to map out these changes and their expected speed and effect, and then to suggest reasons why small vulnerable states (SVS)are more likely to confront difficulties in adjusting to the new liberalised policy framework than are other countries. Policy responses by both national governments and the international community are suggested.

Due to the paradigmatic changes of trade regime, some of the policy responses suggested to the global community include changes in thinking about policy measures to deal with the sources of economic disadvantage faced by small states. Many of these disadvantages are both substantial and exogenous in nature. A substantial portion of trade emanating from small vulnerable states remains dependent upon the existence of trade preferences. To avoid the economic marginalisation of these states in future as a result of the erosion of trade preferences, it is necessary to attempt to engineer instruments of a particular kind. They must be both WTO compatible and more market friendly than trade preference while achieving the same objective, namely creating a direct fiscal incentive for the private sector to locate in small highly disadvantaged countries. The instrument suggested is that of *'investment preference'*. It is an attempt to develop a global system of incentives that results in minimal economic distortions while still providing investors with a direct incentive to locate export-oriented industry in disadvantaged areas. The proposal emulates similar instruments of national trade policy under which national governments currently provide WTO-compatible incentives to move to disadvantaged regions within a particular country. There is no reason why such a facility could not be made available on a global basis to least developed and small vulnerable states as a group.

The WTO issues facing small vulnerable states are considered in detail in the final section of this paper. The greatest challenge facing small vulnerable states inside the WTO is the question of the recognition of their special status whilst at the same time developing initiatives that would enhance their ability to participate in the WTO and in the multilateral trading system. The WTO participation issues discussed relate to the question of political marginalisation, and specific measures recognising small vulnerable states as a group facing similar disadvantages to those of least developed countries are suggested. Raising the issue of special and

differential treatment for small vulnerable states immediately raises the question of an appropriate definition of such states. This taxing problem is considered in some detail. A WTO-compatible definition of 'small' is suggested. Definitional approaches that are likely to minimise political resistance to such a proposal are looked at in the context of the very considerable political constraints and objections to the implementation of the recognition of small vulnerable states.

The paper focuses upon trade policy issues. It does not seek to undertake a detailed economic analysis of the causes and consequences of each of these issues, which is beyond the terms of reference and the resources available for the current study. Moreover, substantial economic research has already been undertaken on the quantifiable effects of trade liberalisation. Revisiting these issues would be repetitious. Nevertheless, there is certainly need for more analysis of the implications for firms operating in small vulnerable states of those states' vulnerability.

The paper also emphasises the experience of small vulnerable states in the Pacific and Indian Ocean, drawing also on the cases of Caribbean and African small states. The Pacific and Indian Ocean small states, numbering 17 in all, are significant not only for the disadvantage of smallness but also for the presence of a very high concentration of least developed, isolated and physically dispersed nation states among them. Thus this group is disadvantaged by a combination of inherent qualities that often adversely affects enterprises operating in them and creates what often appear to be insurmountable sources of economic disadvantage for the development of the private sector.

However, this group of countries also contains two relative success stories. Fiji and Mauritius have managed, at least in part, to overcome the disadvantages associated with their physical characteristics and initial development status. These two countries provide important demonstrations to the international community that with assistance and relatively sound domestic economic policy even countries facing apparently insurmountable difficulties can develop new export industries and make substantial progress towards sustainable economic development. These two countries give some cause for optimism. They demonstrate that the endeavours of national governments and the international community to assist small vulnerable states to a future that is not dependent upon aid flows will eventually bear fruit and that the need for international assistance will not be of indefinite duration.

Small states and the changing global trade regime

Background

The emergence over a period of five years of the Single European Market (SEM), the North American Free Trade Area (Nafta), the World Trade Organisation and the Asian Pacific Economic Co-operation Council (APEC) has totally altered the political economy, as well as the legal rules, of the global trading system. The forces unleashed by the end of the Cold War, the globalisation of information and economic liberalisation, have created a new trading environment to which small highly vulnerable states will have to adjust. Many of these small highly vulnerable states base their international trade upon an extremely limited range of products, the concentration of which is often not substantially different from the concentration of exports during the colonial era. Moreover, much of this production remains dependent upon market access granted under several regional trade preference arrangements. In order to assure that even existing levels of market access into developed country markets are maintained, small vulnerable states in the Caribbean, and the Pacific and Indian Oceans will have to undergo a fundamental renovation of their trade regimes. In addition, the trade regime shift currently occurring will result in a more liberalised trade environment, which will necessitate a fundamental reform of both the domestic economy and traditional sources of government revenue generation.

In essence, the shift in trade regimes has been a movement towards a global regime based on reciprocity within regional liberalisation areas (EU and Nafta) or global trade liberalisation (APEC and WTO). This shift is predicated upon the principle that the products of nations that are part of the free trade area or the multilateral system are to be treated in a like manner. The trade regimes of developing countries have been linked to the former metropolitan powers and to regional free trade areas through non-reciprocal systems that have existed through such initiatives as the CBI and Caribcan in the Caribbean. In the Pacific, Sparteca and the Compact of Free Association between Pacific Islands and the USA have provided similar non-reciprocal regional trade preferences. Virtually every one of the major trade preference arrangements from the pre-Uruguay Round era exists under WTO waiver or suffers from the same definition of WTO incompatibility.

The shift of trade regimes has to be seen in the context not just of the actual agreements and the liberalisation of market access that has occurred, but also the increased legal significance of these trade agreements. The new WTO dispute settlement mechanism (DSM) has meant that the rules of the WTO are now legally enforceable and even small

countries now have access to a quasi-judicial procedure where their international trade rights are protected.[1] Certainly the evidence of the impact for small highly vulnerable states of the WTO's DSM is clear. The WTO complaint by the USA and several Central American countries against the EU banana regime, which threatens to force a complete change in the trade provisions of the Lomé Convention and by extension the entire system of regional trade preferences available to developing countries, leaves no room for doubt.

The change in the trading environment resulting directly from the creation of the WTO has occurred simultaneously with the development of regional free trade arrangements. While the effect of the liberalisation is significant, it will not impact as rapidly upon the trade regime confronted by small states as will the implications of the banana dispute in the coming years. This dispute and the resulting need for a transitional waiver, along with an obligation that the post-Lomé IV trade provisions eventually be brought into conformity with WTO rules, will result in the rapid demise of the regional trade preference regimes that have in the past benefited small vulnerable states. It is argued here that *the web of MFN obligations* implicit, and at times explicit, in these regional trade preference regimes offered by other developed trade and aid partners will mean that *reciprocal free trade areas as proposed by the EU will result in a systemic shift and the elimination of non-GSP trade preference systems*.

Uruguay Round effects

There have been numerous studies of the implications of liberalisation resulting from the Uruguay Round (for example Goldin, Knudsen and Van der Mersbrugghe, 1994; GATT, 1993; Commonwealth Secretariat, 1997; Page and Davenport, 1994; Martin and Winters, 1996). Most have concluded that the benefits of trade liberalisation will be relatively large but unequally distributed, and that there are likely to be countries that are net losers from the round. These groups include:

- *Highly trade preference dependent economies* such as those in the Caribbean and in the Pacific (Davenport, 1996; Grynberg, 1994);
- *Net-food-importing countries*. In particular, OECD studies have indicated that countries that are net food importers and exporters of cocoa and coffee, the post-Uruguay Round prices of which are expected to decline, will experience a clear deterioration in their terms of trade (Goldin, Knudsen and Van der Mersbrugghe, 1994). However, many

[1]In the context of NAFTA an even more dramatic DSM has been developed. For the first time in an important international trade treaty private parties have rights that are enforceable by law.

of the small highly vulnerable states are net food importing states (Commonwealth Secretariat, 1997) and many of the small states in the Pacific and Africa are exporters of the range of tropical tree crop products whose prices are expected to fall as a result of the Uruguay Round agreement.

The net economic effect of Uruguay Round trade liberalisation upon many small vulnerable countries that are also ACP members is likely to be negative (Page, Davenport and Hewitt, 1991; Page and Davenport, 1994), though this will certainly vary from country to country. On the basis of the evidence, those countries that are trade preference dependent and are net food importers are those most likely to be net losers. *The net trade creation effects of Uruguay Round liberalisation will flow to those countries most able to make the economic adjustment to a more open trading environment.* The world will move through successive rounds of trade liberalisation at the WTO to a more open trading environment, and tariff barriers will become less commercially significant. As this happens, *investment decisions will come to be based upon the commercial consideration of which region and country has the lowest operating cost.* As this occurs, investment will tend to move away from those small vulnerable states that are high-cost centres.

The most significant institutional effect of the Uruguay Round on the trade regime of small vulnerable states has been through the increased power of the Dispute Settlement Mechanism. The main impact has been the post-Uruguay Round challenge to the EU's banana regime. For Caribbean countries the experience of the challenge and the possible loss or erosion of preference in the EU banana market has resulted in a frequently negative view of the DSM. However, there can be little doubt that the DSM has increased the power of the small states because it has made it possible for small states to challenge larger WTO members in a forum where the outcome is largely determined by the rule of law.

However, the creation of the WTO and the challenge to the WTO compatibility of the EU's banana regime have together been the harbinger of the regime shift being experienced by those small vulnerable states that are signatories to the Lomé Convention. The legal elevation of the MFN principle of the WTO has meant the undoing of the region-specific and non-GSP non-preferential trade agreements that violate the Tokyo Round Enabling Clause and the Part IV provisions that brought them into existence.

WTO compatibility of the Lomé Convention

The central tenet of WTO law is Article I (MFN) as adapted by the Enabling Clause of the Tokyo Round and Part IV provisions. With the

exception of Free Trade Areas (FTAs), Customs Unions and interim arrangements, the exports of WTO members of a similar development status should be treated by other WTO members in an identical manner. The current Lomé trade regime clearly violates this provision as it discriminates in favour of some developing and least developed countries (i.e. the 70 ACP states) and against other countries of a similar development status (for example Latin American countries). The current Lomé Convention exists under a WTO waiver which will expire, with the Lomé Convention itself, in February 2000. It will need to be revised and possibly a further five-year transitional waiver to facilitate negotiations will have to be negotiated. The present Article I violations, as opposed to other possible violations of GATT provisions, are covered by the current WTO waiver.

In order to assure WTO compliance, the EU has proposed, in the Green Paper on the Future of Relations with the ACP, a fundamental change in the post-Lomé IV trade regime. The EU's proposal suggests both the creation of FTAs for non-LDC ACP states and the provision of non-reciprocal preferences on an MFN basis (i.e. to Lomé Convention as well as non-Lomé Convention signatories) to all LDCs. This dichotomy between Lomé-equivalent preferences for all LDCs, and FTAs for the rest, would assure WTO compatibility of the Lomé Convention with Article I. It would, though, do nothing to assure the protection of the Commodity Protocols which, it could be argued, are in violation of other provisions such as Articles XI, XIII(c) or XVI.

The evolving EU negotiating position does not reflect just a desire for WTO compatibility: it has shifted since the publication of the Green Paper and has come to reflect *a fundamental shift of the EU's trade interests in the ACP*. The original Lomé Convention (1975) was drafted at a time when the EU and much of the developed world were concerned with resource security. Provisions such as Stabex, which originally tied stabilisation payments to the supply of raw materials to EU, are now slated for elimination under the post-Lomé IV trade arrangements; and commodity protocols, which once assured EU's supply of basic raw materials, are now seen as anachronistic. Two components to the new EU trade proposals for the post-Lomé IV framework are now important:

- the WTO compatibility of the trade preference regime and the commodity protocols;
- the advancement of EU market access and trade objectives in the Millennium Round.

The proposed resolution of the WTO compatibility question also happens

to further the second objective of enhancing EU market access. While marginal improvements in access may be possible in Africa, given the dominance of the EU as a development and trade partner, the MFN obligations in the Caribbean and the Pacific will mean that no effective margin of trade preference will result. Thus the EU's trade interest has shifted from the concern for *raw material supply* in the 1970s to concerns about *increased market access* for EU exports. The EU's negotiating mandate for the post–Lomé IV trade regime reflects these new concerns.

The EU negotiating mandate: from WTO compatibility to the Millennium Round agenda

The ACP negotiating mandate rests upon the natural desire of any recipient of aid and trade preference to build upon the *acquis* that has already been negotiated over four Lomé Conventions. While the ACP wants to see improvements in the Convention, there are no ACP proposals that seek any fundamental change from the Convention's Lomé IV format.

The EU position on the Lomé Convention was first outlined in the EU's 1996 Green Paper on its relations with the ACP states. Much, but not all, of the discussion in the trade section of the Green Paper was preoccupied with the question of WTO compatibility of the trade preference regime. In the Green Paper the EU also expressed its interests in developing a multilateral investment agreement with the ACP, but there was no explicit elaboration on the content of the proposed arrangement.

The EU offered three non-mutually exclusive routes to assuring WTO compatibility of the existing trade regime:

- the creation of up to *six regional free trade areas* in which ACP regions would reciprocate to the EU (i.e. compatibility with Article XXIV);
- the offer of a *super-GSP to all LDCs* (including nine non-ACP states) and the placement of developing countries on the existing EU-GSP (to be revised by 2004) which, under current rules, would result in greatly diminished access (thus rendering trade preference regimes compatible with Part IV provisions and the Enabling Clause);
- seeking a continuation of the existing waiver arrangements under Article XXV.

In fact the EU has, to varying degrees, offered all three options to the ACP. At the Singapore Ministerial Conference of the WTO in 1996 the EU indicated its intention to extend the Lomé-equivalent preferences to all LDCs, including nine countries that were not members of the WTO. The offer of the extension of Lomé-equivalent preferences to all LDCs was made formally at the High-Level Meeting on Least Developed

Countries at the WTO in October 1997. Given WTO rules, this in effect determined the form of the rest of the post-Lomé trade regime. By offering to extend EU preferences to all LDCs, the Article I violation as it pertains to LDCs had been eliminated. All LDCs would now be treated the same. The problem that remained for the EU was to assure a WTO-compatible treatment for non-LDC ACP states, i.e. for the developing countries. To deal with this group of countries the EU has offered what are, from an ACP perspective, either of two relatively unpalatable options:

- the creation of regional FTAs or regional economic partnership arrangements (REPAs) with an obligation to eventual reciprocity for non-LDC ACP states; or
- the diminution of market access rights by relegation to the EU-GSP for those countries unwilling to accept reciprocity. GSP, unlike Lomé, is voluntary and non-contractual in nature and can be unilaterally withdrawn.

Between the publication of the Green Paper in October 1996 and the publication of the EU's negotiating mandate in June 1998, it became clear that the EU negotiating position was *not simply aiming to resolve the question of WTO compatibility*. Its goal was to *improve EU access into ACP, or more accurately African, markets* and push forward its own Millennium Round agenda. In his opening of the Lomé negotiations in September 1998 Commissioner Pinhero was quite explicit about the overall EU objectives:

. . . *Set against the background of resolving the world's problems, the relationship between Europe and the ACP countries is particularly significant*. It could act as a catalyst, particularly in areas in which the multilateral system is not making enough headway. *The EU-ACP partnership could prove particularly fruitful in terms of genuine and significant progress in fields such as codes of conduct, respect for labour and environment standards, a common approach to competition rules and giving a sense of responsibility to people involved in economic activity and civil society whose field of activity transcends borders (emphasis added)*.

The EU negotiating mandate itself stated quite clearly what the EU wanted to negotiate:

- achieving a satisfactory and effective level of protection for intellectual, industrial and commercial property (TRIPs Agreement);
- fulfilment of commitments on standardisation and the application of the WTO's Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT) Agreements;

- promoting competition policy;
- ensuring that trade is undertaken in a manner that is environmentally sustainable;
- confirming parties' attachment to internationally recognised labour standards;
- establishment of a suitable regulatory environment for telecommunications and the fulfilment of obligations under the WTO Agreement on Basic Telecommunications;
- right of establishment of enterprise on an MFN basis along with general principles on the protection and promotion of investment, along with free repatriation of FDI.[1]

There is an obvious and demonstrable similarity between the EU's agenda in the post-Lomé negotiations, the existing WTO rules and the EU's bargaining objectives for the next round of multilateral trade negotiations scheduled to begin in the USA in late 1999. The inevitable conclusion to be drawn is that the EU's objectives for post-Lomé negotiations go well beyond the issue of WTO compatibility of existing trade arrangements. They appear to have the objective of enforcing the existing WTO disciplines and also creating a possible precedent for new disciplines that the global community has not yet accepted.

The irony of the EU proposals for the creation of regional FTAs with the ACP is that in an attempt to render its regional trade preference arrangement compatible with its WTO obligations, it is likely to bring about the demise of all such arrangements.

WTO issues in the EU negotiating mandate

The Framework Agreement

The EU's negotiating mandate extends to both framework agreements, which will be negotiated with all ACP countries before February 2000, and the Regional Economic Partnership Arrangements, i.e. regional FTAs, which will be negotiated once the framework agreements are completed. The EU's objective in the Framework Agreement is to negotiate existing WTO disciplines into the revised convention, as well as covering new issues, i.e. trade and environment, competition policy and labour standards disciplines. This creates at least three problems for small and vulnerable ACP states.

It would be diplomatically and politically imprudent if the ACP were to

[1]EU Negotiating Directive, pp. 24–5.

negotiate a post-Lomé trade arrangement based upon the EU's negotiating mandate prior to (at very least) the conclusion of the negotiations in Geneva over the agenda for the Millennium Round. Negotiations in the new round based only upon the so-called 'built-in agenda' of the Uruguay Round, i.e. mainly agriculture and services, are emerging as the modal position of the developing world and such a position should not be undermined by negotiations in Brussels that pre-empt decisions at the WTO. Any ACP/EU negotiations in these so-called 'new areas' should be confined to possible areas of technical assistance in the application of any WTO disciplines that may be negotiated at a multilateral level.

There is an implicit assumption in the EU negotiating mandate that ACP countries are WTO members and accept WTO disciplines. While this is true for more than 52 of the countries, it is not true for all of them and it is by no means evident why these non-WTO countries should be asked to accept multilateral disciplines in trade to which they have not agreed. Any post-Lomé arrangement should not bind ACP countries that are not members of the WTO to WTO disciplines.

Agreement to negotiate on the so-called 'new-issues' prior to the completion of the WTO negotiations could create the possibility that what will be negotiated will also not be compatible with as yet incomplete WTO disciplines in this area. In light of the experience of WTO incompatibility with the existing Lomé trade provisions, one would imagine that all signatories of the Lomé Convention would be reluctant to rush into areas where the negotiations over WTO disciplines are not complete.

The Regional Economic Partnership Arrangement

The EU's REPAs are problematic in terms of ACP solidarity in that the EU may be able to negotiate better terms from one region than from another. There is a legitimate concern that this would lead to the break-up of the ACP Group, which affirmed at the Libreville Summit of 1997 that it wished to remain in being. Perhaps as significantly, it would lead to weaker regions negotiating access arrangements that result in a deterioration in access provisions. One resolution to this problem lies in including an *MFN provision in the framework agreement* stating that any non-commodity specific concession granted to one region will be available to all ACP regions.

A second important issue is that the *economic cost of the transition to free trade may be very high* for those 'small' but non-export enclave countries that are large enough and sufficiently highly developed to pursue monetised production for the domestic market. In these cases the loss of tariffs may have very adverse effects upon the development potential of these

countries. It is, however, unlikely to affect those that have pursued, on the basis of the size of the domestic market or on resource availability, a purely export-oriented trade policy.

Perhaps the most significant difficulty of the REPA is economic rather than political. In October 1998 the EU had already produced studies using very restrictive assumptions and terms of reference. *It is by no means evident that a REPA with any of the African, Caribbean or Pacific countries is feasible*. Indeed, as has been argued above, its implementation would almost necessarily invite *MFN demands from other large trading and development co-operation partners such as the USA, Japan and, in the case of the Pacific, Australia*. The political reality is that a REPA with Europe would imply the complete elimination of tariffs in what would almost certainly be 90 per cent of trade. The developing ACP countries may have no choice if they wish to maintain Lomé access to the EU market.

The REPA arrangements also have a number of very important WTO implications that the ACP countries should consider.

The most obvious difficulty is whether the EU and the three or possibly even six ACP regions will have sufficient time to negotiate a REPA. The EU has stated that it will attempt to negotiate a further five-year WTO waiver for the existing Lomé trade preference provisions, to allow time for the negotiation of a REPA. Given the current heightening of trade tensions between the USA and the EU over the EU banana regime, *it is by no means certain that the EU and the ACP will achieve consensus at the WTO over a further five-year waiver* without considerable concession to the Central Americans and other parties that have expressed concern over various aspects of the existing Lomé Convention trade regime.

The WTO's dispute settlement mechanism allows for 'situation' disputes as well as 'non-violation' disputes.[1] Since these are becoming more common, assuring WTO compatibility will not guarantee that a WTO member's trade regime will necessarily remain unchallenged.

The EU may be able to achieve an Article I waiver but it could be argued, as it has been in the three banana panel reports, that the extent of WTO incompatibilities may go well beyond just Article I to Article XI, XIII, or XVI. In the case of *the commodity protocols, which are arguably still the most commercially valuable components of the Lomé trade regime*, there is very

[1]Under a non-violation dispute such as Fuji-Kodak, the USA claimed that even though Japan was not violating any of its WTO obligations, the US trading benefits had nonetheless been nullified or impaired. A successful outcome of such a 'non-violation dispute' implies a right of retaliation or compensation as the trade regime is by definition in conformity with its WTO obligations.

little likelihood that the WTO will agree to waivers that will cover possible WTO violations in the area of tariff quotas and quantitative restrictions. Such waivers have rarely been given in the past. Thus *the REPA will provide no protection for any possible non-Article I violations of the WTO agreements that may stem from the commodity protocols*.

The transitional arrangements envisaged in the REPA are of ten years' duration. For many small and highly vulnerable states this may prove to be too short a period for the economic and structural change required. Given the terms of the WTO's *Understanding on the Interpretation of Article XXIV*, transitions to FTAs should take no more than ten years. It may require the negotiation of a special and differential provision in the next round to permit longer (20-year) transitions for FTAs between developed and developing countries.[1] (The Bogor Declaration (1995) and the effective 25-year transition allowed for APEC liberalisation for developing countries should be a precedent for such arrangements.)

REPAs in the Pacific and the Caribbean

The changes that have occurred with the creation of the WTO and the contemporaneous shifts in regional trade regimes resulting from the Single European Market (SEM), Nafta and APEC have resulted in the lowering of MFN and regional tariffs by developed and developing countries. This has lowered the margins of trade preference available to small vulnerable states. But it is argued that the creation of the WTO's powerful DSM and the challenges to the EU banana regime (leading to the subsequent need to transform Lomé trade rules) will, through MFN demands of other trading partners, result in the phased elimination over time of the tariffs of the small states of the Pacific and Caribbean. Because of the *'web of implicit MFN obligations'* found in existing treaty obligations between Caribbean states and the USA on the one hand and the similar but implicit MFN obligations between the Pacific island states and Australia, New Zealand and the USA on the other, regional trade preference arrangements will disappear. The section below considers these trade treaties in greater detail.

Caribbean

The Caribbean is involved in a number of important regional non-reciprocal and reciprocal trade arrangements. While the Lomé Convention

[1]Until now the WTO Committee on Regional Arrangements has not applied stringent rules and has not rejected any regional arrangement that has been brought before it. However, there is increasing pressure inside the committee to develop more stringent terms and to review FTAs, Customs Unions and interim arrangements.

has been crucial to the states of the Caribbean, relations with Western Hemisphere trading partners are becoming significant. In particular the US Caribbean Basin Economic Recovery Act (CBERA), more commonly known as the Caribbean Basin Initiative (CBI), of 1984 (renewed in 1992) has provided duty free access for Caribbean products into the US market. The provisions of this agreement stipulate quite clearly under Section 2702 of the US Code that the President of the USA shall not designate a country to be the beneficiary of the CBERA:

[i]*f such a country affords preferential treatment to the products of a developed country, other than the United States, which has, or is likely to have, a significant adverse effect upon United States commerce, unless the President has received assurances satisfactory to him that such preferential treatment will be eliminated or that action will be taken to assure that there be no such significant effect, and he reports those assurances to Congress.*

While there is no explicit demand for MFN treatment, it seems clear that the US intention is to assure that US exporters are not disadvantaged in Caribbean markets by concessions that the Caribbean might make to other developed countries. The USTR is required by the US government to undertake a review of the CBERA every three years to ascertain whether US exports have been put at a competitive disadvantage in Caribbean markets.

However, the CBI is not necessarily the most important preference arrangement for the Caribbean region, either economically or statistically. To Jamaica the 807 US Offshore Assembly Program and the 807A Special Regime have been important in facilitating export oriented manufacturing activities. While the CBI excludes garments and textile products, these programmes deal specifically with these types of products and have been the basis for exports of these products from the Caribbean.

Canada has also offered a series of programmes that provide non-reciprocal trade preference arrangements for the Commonwealth countries of the Caribbean basin. Traditionally this was offered through the British Preferential Tariff (BPT), which continued until early 1998 when it was discontinued. Side-by-side with the BPT arrangement, the Canadian government developed the Caribcan initiative in 1986. This was extended in 1996 and received a ten-year waiver (until 31 December 2006) at the WTO. While Caribcan excludes large sections of the Canadian tariff schedule,[1] it has offered essentially duty free access for

[1]The most important exclusions include:
- goods of HS Chapters 50 to 65 inclusive (all textile and clothing products);
- goods of HS 42.02 (suitcases, handbags etc.) other than leather luggage of tariff item 4202.11.00;

most Caribbean exports. Thus while the Caribcan scheme is not written with explicit MFN conditionality, it does contain provisions that would permit Canadian revocation of preferential access provisions.[1]

These explicit or implicit MFN obligations in the CBI and Caribcan mean that once the Caribbean begins negotiating a REPA with the EU it can almost certainly expect similar demands from its other trading partners that have traditionally offered trade preference. The creation of the Free Trade Area of the Americas (FTAA) thus stands as one way to deal with the issue of the MFN obligations of the Caribbean states towards their North American trading partners. However, the FTAA is by no means the only way, and it may be possible to engineer less wide-ranging trade arrangements with Nafta in the event that the FTAA proves difficult to negotiate. It is clear that the EU proposals for a REPA will mean that the Caribbean will be faced with no option but the eventual elimination of import duties on substantially all trade. What 'substantially all trade' will mean precisely, and over what period, will be the subject of negotiations, but with import duties removed from imports from the EU, the USA and Canada, the remaining system of import duties would be highly distortionary. Thus in the Caribbean, the resolution of the WTO incompatibility of the Lomé trade provisions will mean that through MFN effects in the Western hemisphere, there will be a complete realignment and economic restructuring of the system of trade and revenue generation in the highly import duty dependent economies of the Caribbean.

The Pacific Islands

In the Pacific Islands region trade preference issues remain just as complex – possibly even more so – than in the Caribbean. The region is still heavily dependent upon trade with its former metropolitan powers. The 14 independent island states of the Western Pacific that are members of the South Pacific Forum maintain with their former colonial powers a series of non-reciprocal preferential arrangements similar in nature if not in scope to the Lomé Convention. Under the terms of the Sparteca Treaty Australia and New Zealand have, since 1981, granted non-reciprocal access to exports originating in the 14 Forum Island countries.

- goods of tariff item nos 2710.00.20 (aviation gasoline), 2905.11.00, 3403.11.10 (lubricants), 3403.19.10 (lubricants, grease, oil etc.) or 4203.10.00 (leather apparel); and
- goods subject to an MFN rate of duty of more than 35 per cent.

[1]The 1986 legislation states:

Withdrawal of Benefits: The Governor in Council may, by order, from time to time withdraw the benefit of importation free of duty . . . in whole or in part, from any country to which that benefit has been extended (GOC Parliament, 1986).

This agreement has been notified to the WTO under the terms of the Tokyo Round Enabling Clause.[1]

The three former US Trust Territories of Marshall Islands, the Federated States of Micronesia and Palau also benefit from the Compact of Free Association with the USA, which provides, *inter alia*, for free market access for all products except tuna, the one natural resource the region has in abundance. These three countries along with Niue, Nauru and Cook Islands have sought membership of the ACP group. The request, which was endorsed by the Forum Heads of Government in 1997, has been forwarded to the ACP and the EU. The accession of the four Micronesian states (Marshall Islands, Federated States, Palau and Nauru) is important in the process of redefining the relationship between the EU and the Pacific on a new economic basis of mutual interest.

The South Pacific remains one of the few regions in the world where the fisheries effort in the main species of skipjack tuna is well below maximum sustainable yield. At present the estimated catch in the Exclusive Economic Zones (EEZs) of the countries of the Forum Fisheries Agency is approximately 1.2 million tonnes of skipjack This can readily be raised to the approximately two million tonnes that is conservatively estimated as the maximum sustainable yield. The EU is now actively considering negotiating a fisheries access arrangement with the Pacific islands. This would mean that there would develop a new foundation for the relationship based upon mutual advantage. The four Micronesian states are the most 'resource rich' in the Western Pacific in terms of tuna stocks because they are all located in the tropical zone where tuna stocks are plentiful. The commercial value of EU access into the region would be greatly diminished if its vessels did not have access to the EEZ of these Micronesian states.

If the Micronesian states were to enter into the ACP group and were to want the benefits of preferential access into the EU market currently available to the other ACP states under the Lomé Convention, they would eventually (2015–20) have to reciprocate to the EU, for they are all classified as developing rather than least developed countries. Unlike those other Pacific island states that have been members of the ACP for many years and have developed their economies partly upon the basis of Lomé trade preferences, there would no immediate losses to the Micronesian states in the event that they accept the GSP option.

[1]The fact that Sparteca was notified does not mean that it is consistent with WTO rules. It suffers from the same WTO incompatibility as the preferential tariffs of the Lomé Convention. Australia also has a non-reciprocal bilateral agreement with Papua New Guinea, Pactra.

However, just as in the Compact of Free Association, they would then not have preferential access into the EU market for the one resource that exists in abundance, i.e. tuna. However, given the importance of the US as an aid donor, if the Micronesian states were to reciprocate to the EU they would have little choice but to reciprocate to the USA. They would then be in precisely the same situation as those countries benefiting from the Caribbean Basin Initiative.

In the Pacific the difficulties created by a post-Lomé trade regime based upon reciprocity to the EU are not limited to the relationship between the three Micronesian states. They extend to the very important trading and aid relationship that exists between the South Pacific island countries and Australia and New Zealand. The Lomé Convention states that the EU expects MFN treatment in the event of an ACP state offering improved access to another developed country. This position has been reiterated in the Green Paper: the EU has stated unequivocally that it will not accept being discriminated against in ACP markets. However, the same is true for Australia and, to a much lesser degree, New Zealand. Both have provided duty free access to their markets under the Sparteca agreement to all 14 Forum island countries and for Australia, in particular, the Pacific islands market is important.[1] The potential for trade diversion created by a regional arrangement with the EU may disturb the dominant Australian position in the Pacific market for consumer and investment goods. While there are no explicit MFN provisions in the Sparteca arrangement, it is clear that there exists an implicit or *de facto* MFN obligation, given the dominance of Australia as both a trading and development aid partner. In the case of New Zealand, which plans to phase out all tariffs by the year 2002, the Sparteca treaty will offer no margin of preference to the Pacific island states. Consequently, it has played a low-key role in the development of a post-Lomé trading arrangement with the Pacific ACP.

The Pacific Islands region remains one of the few regions in the world where there is no comprehensive regional integration agreement such as the Southern Africa Development Community (SADC).[2] The Pacific island countries have been debating for almost two years the creation of

[1]Australian exports to the Pacific islands totalled AUD1.5 million in 1996, which consisted very largely of manufactured exports. While this was only 4 per cent of total Australian exports, the Pacific islands region is considered by Australia to be a small but very profitable market for Australian exporters.

[2]The Melanesian states have created a regional FTA called the Melanesian Spearhead Group Trade Agreement. It was negotiated in 1992 and has made only very limited progress towards trade liberalisation. It now includes the four largest economies in the region – Papua New Guinea, Solomon Islands, Vanuatu and Fiji.

a regional free trade arrangement. Without such an agreement it will be difficult, but not impossible, for Pacific island countries to form a REPA with the EU.[1] The formation of a free trade area was proposed by the Forum Heads of Government meeting in Rarotonga 1996. The Forum Trade Ministers meeting scheduled for mid-1999 will consider the establishment of such a free trade arrangement. If the non-LDC Pacific ACP states (which currently include Tonga, Papua New Guinea and Fiji, and could include Samoa and Vanuatu if they are graduated by ECOSOC in 2000), are to continue having Lomé preferential access to the EU market then they should create a regional free trade area.

If the Forum Free Trade Area includes Australia and New Zealand, who are important members of the Forum, then this will create some measure of difficulty as a basis for a REPA with the EU. The technical problem stems from the fact that Australian originating products would clearly not be acceptable to the EU. *Any EU concerns over the potential for 'preference contamination' in such an arrangement can be dealt with by an appropriate definition of qualifying area content and cumulation rules. In this way an FTA that includes Australia and New Zealand on an MFN basis with the EU may be technically possible as a basis for the REPA.*

Globalisation and the adjustment problems of small vulnerable states

Characteristics of efficient national economies in a global market

In the previous section it was argued that the combined effects of MFN liberalisation at the WTO and at regional level will greatly diminish the commercial value of trade preferences. Bringing the EU trade preference regime into conformity with its WTO obligations by the creation of regional free trade areas will, however, serve to erode trade preference even more dramatically and quickly, as the web of MFN obligations in other regional trade preference arrangements will mean that small states will be forced to reciprocate to other large trading partners. This in turn will mean that small states will have little choice but to confront a more competitive trading environment. *The societies that will be most able to take advantage of the market opportunities created by a more liberalised market*

[1]It is possible to create a series of bilateral free trade arrangements under which all present and future ACP developing countries reciprocate to the EU over 10 to 15 years on a bilateral basis. This would mean that the EU would enjoy a greater margin of preference in these markets than that of neighbouring countries.

environment are those best able to move and change with changing market opportunities.

Economists normally associate the following features with societies that are best able to adjust to the market:

- a pool of *freely traded and specialised* land, labour and capital that is mobile, with low transaction costs in its inter-sectoral mobility;
- an efficient information system that disseminates relevant *market information* rapidly and at low cost;
- a *physical infrastructure* that permits efficient movement of goods, services, resources and natural persons;
- a social and political infrastructure conducive to *predictable legal outcomes*.

In all economies, two types of factors are responsible for the absence of these characteristics. The first are *domestic policy induced factors* and the second, *exogenous or inherent factors* that are beyond the immediate policy purview of national governments. Market-oriented structural adjustment programmes are necessary to deal with the policy induced sources of inefficiency and market failure. Nevertheless, it will be argued, other (possibly multilateral) forms of policy intervention by the global community are necessary if small states are to cope with those of their inherent cost disadvantages that induce economic marginalisation.

Adjustment problems of small states

Through a combination of historical circumstance and the evolution of commercial advantage, exports from small countries have tended to remain largely confined to a limited number of products. Small states face fundamental barriers to adjustment that stem from the high cost of sectoral shift from what are often agricultural monocultures to economic structures attuned to a more liberal economic environment. What makes small states and enterprises in those states so fundamentally different from those in larger states is the very limited pool of specialised domestic resources available to firms. The absence of such a pool in turn raises the costs of sectoral and structural change. Moreover, the high degree of economic specialisation resulting from limited export and domestic market production has meant that adjustment away from these sectors is all the more difficult.

A well known and understood list of inherent characteristics is at play in many small and highly vulnerable economies. These characteristics or factors, when operating together, render markets in small economies less

capable of adaptation to global market change. They include:

- diseconomies of scale in production for both domestic and export markets;
- physical dispersion of small pockets of resources, products and persons (especially in island states);
- physical isolation from resource and export markets;
- lack of trade and economic integration permitting the acquisition of domestically scarce resources at competitive market prices;
- poor development of human resources, especially of skilled labour and entrepreneurial skills;
- poor physical and communications infrastructure;
- a high degree of vulnerability to the economic impact of natural disasters.

This list of characteristics is frequently produced, but less common is an understanding of the dynamic interaction between these characteristics in creating cost disadvantages for firms operating in this environment. The interaction between these disadvantages is not necessarily linear, and often produces exponential increases in the costs of production facing firms operating in small isolated states. An example may suffice to demonstrate the nature of the interaction. In the early 1990s the Government of Fiji was considering diversification into the export of cut flowers. The cost of airfreight of cut flowers from Hawaii (one of the principal Pacific suppliers) to Tokyo is approximately US$1/kg. To export a similar quantity of cut flowers from Fiji to Tokyo costs US$4/kg. In other words, while the distance between Fiji and Tokyo is double that between Hawaii and Tokyo, the airfreight is quadrupled. However, as is well understood in transport issues, economies of scale are often more important than distance in determining freight rates. Export from Hawaii to Tokyo is frequently done in large specialised air freighters because the economies of scale exist to permit this type of development. In Fiji the export of cut flowers (and chilled fish) could only be done in the cargo hold of passenger flights. Thus diseconomies of scale combine with isolation and distance from markets to render sub-economic the development of an export oriented cut flower industry. This problem can be overcome, as was the case with some Asian exporters, who developed a cut flower export industry by subsidising airfreight in the initial stages, until volumes were adequate to assure the development of specialised air services. However, under WTO rules direct export subsidies are prohibited for all members except LDCs or countries with a GNP of US$1,000. Fiji, by virtue of its

GNP/capita, is prohibited from providing such export subsidies.

Smallness per se is not necessarily an overarching barrier to a country's ability to shift resources and products between users and markets, which is the essence of the adjustment required in order to prepare for a liberalised market. It could readily be argued that more developed small states are in fact better able to shift resources because of the physical proximity of social and physical infrastructure. It is commonly argued that smallness is not a problem because resources required for change, but not available domestically, can be acquired through international trade from related or associated countries. However, their acquisition from global markets is often in small volumes, which in turn means that firms must pay a premium to world price. This high cost of imported inputs is a particular problem where firms need to acquire skilled labour and managerial talent, and this in turn results in relatively high unit costs in small and isolated locations.

Enterprises originating within those small states suffer from a further dynamic disadvantage in that they are unable to undertake what has long been considered a normal corporate development path in larger economies, i.e. from supplying the local market, usually with some measure of government protection, to supplying the export sector. This is not possible for firms in these very small states, as the domestic market in which they operate is very small. Hence, they are often unable to acquire the necessary experience and market skills before entering much more competitive international markets. Thus the natural learning curve that has been the basis for corporate development in larger economies is not available to firms located in small states. The denial of access to this dynamic process in small states constitutes one very important reason for the lack of entrepreneurial talent outside the agricultural sector.

Dealing with endogenous and exogenous causes of inefficiency

The traditional economic response to the inherent barriers of smallness, isolation and less developed factor markets, and indeed any other undesirable qualities, has been to argue that domestic factor prices in such economies must be adjusted downwards to reflect these cost disadvantages. Adjusting factor prices sufficiently to compensate for these disadvantages, it is argued, would induce firms operating in competitive industries to locate in small and highly disadvantaged states.

This raises an important empirical question. In small highly vulnerable economies, does there in fact exist sufficient domestic value added (over and above the subsistence reservation wage in the case of labour, the zero

risk rate of return on capital and a zero rent for land and resources) to compensate potential investors for the cumulative cost disadvantages faced by the private sector in such economies? In other words, the commonly noted absence of bankable private sector investment projects in small vulnerable economies may not be alleviated by normal structural adjustment programmes. Such programmes act to lower factor prices to market determined levels as there may be insufficient domestic value added to compensate for the plethora of inherent disadvantages associated with these economies.

If normal competitive industries cannot be readily established in these small highly vulnerable economies, this still does not necessarily justify any market distorting intervention by the international community. It is argued that small highly vulnerable countries may be able to develop their productive capacity in niche market sectors. Such a possibility is predicated upon the existence of quasi-rents, which will permit production at costs that are above normal competitive levels. However, *while in other economies these quasi-rents constitute a basis for high profits, in small states they are often a precondition for productive commercial activity as rents are necessary to cover inherently high operating costs.*

Examination of the history of the post-independence period in the Pacific islands – a region where many of the other disadvantages frequently associated with smallness are found – produces abundant evidence *that the emergence of virtually every new export sector has been associated with three different forms of quasi-rents.* These have been either market created or *de jure* rents. The market creates two different types of quasi-rent: either when markets boom or when a peculiar combination of circumstances makes the supply of a particular product difficult, i.e. niche markets. However, both national governments and the international community have created *de jure* sources of quasi-rent through tax incentive schemes and trade preference arrangements. The main sources of quasi-rent have included:

- ***Booming Sectors*** – Papua New Guinea oil and gold development (1980s) and Solomon Islands logging (1990s)
  The movement of resource developers into these Melanesian countries immediately followed a price peak that led to an expectation of quasi-rents. Both Solomon Islands and Papua New Guinea are considered very high cost locations for exploration for oil and gold and the development of logging. In the case of the development of gold mines and oil and natural gas deposits in Papua New Guinea, the main spur to exploration was the boom in oil and gold prices in 1979–80. The rapid expansion of logging in the Solomon Islands, and also in Papua

New Guinea, is a direct result of the contraction of supply from Sabah and Sarawak and a consequent price peak in the South Sea log market in the early 1990s.

- ***Niche Market Sectors*** – Squash exports to Japan from Tonga; sashimi from Fiji; kava from Vanuatu, Samoa and Fiji; and seaweed from Kiribati

  The Tongan squash export industry has relied on a two-month window of exports into the Japanese market, where premium prices are paid in the months of November and December. Tonga is one of the few countries that have been able to supply squash consistently at that time of year. The export of sashimi to Japan from Fiji, and to a lesser degree from the Marshall Islands and Solomon Islands, has been predicated on the high prices that are paid for premium tuna in Japan and Korea.

  The rapid emergence of the Pacific beverage kava as a natural sedative has been associated with very high export prices. The development of seaweed exports for pharmaceutical use from Kiribati has only been possible because premium prices are paid for these exports.

- ***Trade Preference*** – Garments from Fiji; canned tuna from Solomon Islands, Fiji and Papua New Guinea; electrical harnesses from Samoa

  Trade preference arrangements have been extremely important in the early development of tropical agricultural exports but have been less significant as liberalisation has eroded the margin of preference. This has been particularly so in the case of Melanesian tropical tree crop exports such as palm oil, cocoa and coffee.

The main contemporary impact of trade preference has been in the diversification into garment exports to New Zealand and then Australia from Fiji after 1988 under the terms of Sparteca. Canned tuna exports from three Melanesian countries (Papua New Guinea, Solomon Islands and Fiji) occur under the 24 per cent trade preference margin of the Lomé Convention. This has been one of the most conspicuous successes of export diversification of the Lomé Convention. Electrical harnesses for automobiles are exported from Samoa to Australia under Sparteca. At present employment is as high as 2,000 workers in Samoa's largest private sector employer.

Problems of quasi-rent based development

While these quasi-rents have been necessary in small vulnerable states in order to establish new industries, they have all, in quite different ways, created difficulties.

Booming sectors have been widely recognised as having negative impacts, through *Dutch disease effects* upon the non-traded goods sectors of the economy. This has certainly been true in the case of both Solomon Islands and Papua New Guinea. While in theory it remains possible to manage resource booms effectively through various macroeconomic instruments, small countries are particularly vulnerable to such phenomena. Even in sectors where small states have been successful in niche marketing, their small size renders them more highly prone to Dutch Disease effects, which often result in the destruction of non-booming traded goods sectors of the economy and even occasion deleterious effects upon the booming sectors themselves. For example, Tonga's squash boom drew labour away from the manufacturing sector, which resulted in a downturn in export oriented manufacturing activities as well as the state sector.

Niche market activity can constitute a commercial market based foundation for trade policy in small states. However, the *information flows* and international *marketing connections* that are necessary for such a form of development, i.e. the second condition listed at the beginning of this chapter, are often not available in small vulnerable states, particularly in isolated small island countries. As a result, some highly vulnerable small states, which may be more able to make the change to a niche market based economy, are not obvious candidates for the use of niche marketing as a foundation for trade policy. They are disqualified by the lack of a suitable information infrastructure and sophisticated and well established marketing links.

Niche market activities are by their nature highly variable and require rapid adaptation to emerging market conditions. The existence of quasi-rents, which by definition characterises niche markets, attracts the entry of competitors. Thus what in one year may be a highly profitable niche market may very soon become a crowded low profit activity associated with high private and social exit costs.

Trade preferences in the Pacific have played a vital role in providing a source of quasi-rents that have successfully induced investment in small vulnerable states. However, even large margins of trade preference had little effect in the case of the most vulnerable and disadvantaged economies, although countries such as Fiji, Samoa, Solomon Islands and Papua New Guinea have taken advantage of trade preferences. It is, nevertheless, clear from the evidence presented above that while trade preferences are extremely important to small states, they cannot for long remain a basis for the development of these states.

This is not to suggest that small states are inherently incapable of dealing

with globalisation, but rather that they face inherent or exogenous cost disadvantages that are not readily amenable to domestic policy change. Special transitional arrangements are needed to assist the shift to a more liberalised environment. Thus policy prescriptions predicated purely upon market-oriented structural adjustment are necessary but not sufficient conditions to assure that small vulnerable states become integrated into the global economy. The challenge for the international community is to design interventions that will facilitate the development of the private sector in countries that are inherently disadvantaged, without simultaneously subsidising the conduct of economic policy that retards the development of the private sector.

Interventions by the international community

The interventions proposed in this section are predicated upon the preceding analysis. This, in turn, is based upon the logic that while market-oriented reforms are necessary, further interventions that seek to address, or at least ameliorate, the inherent or exogenous problems confronting small economies are also necessary if any serious impact upon trade marginalisation is to be realised.

To date there exists no coherent international economic and trade policy on vulnerable small states as it is only now being recognised that the barriers to their economic development faced by such states may approximate those of the least developed countries. The least developed countries constitute the only group currently recognised explicitly by the WTO. The trade policy of the international community towards them has been developed as a result of the 1997 High-Level Meeting on Least Developed Countries, co-ordinated by the WTO and five other multilateral agencies including WTO, UNCTAD, the International Trade Centre (ITC), the UN Development Programme (UNDP), the World Bank and the IMF. The outcome of the meeting was based on three approaches to tackling the overall problem of marginalisation:

- Improvements in market access through the Generalised System of Preference by several developed and developing countries. The EU announced its intention to extend Lomé-equivalent market access to nine non-ACP LDCs;[1]

[1]This improvement in access for LDCs, announced by the EU at the High-Level Meeting, meant that the Lomé Convention trade access provisions for LDCs would now be WTO-compatible. Thus a major part of the EU's WTO/Lomé problems was resolved through this generous extension of preferences to cover all LDCs.

- Co-ordinated technical assistance programmes of the multilateral agencies to assure that countries are able to take advantage of the opportunities created by the multilateral trading system;
- The possibility of creating an insurance facility for LDCs and possibly small states, the only concrete measure involving resources, may be extremely useful, given the risks posed to the business community by natural disasters. Whether such a facility will be for public infrastructure or accessible by the private sector is not known.

The outcome of the meeting has been the development of a series of national action plans for each of the LDCs, many of which are also small states. Resources from the international community to implement these action plans have not, by and large, been made available. These action plans will provide LDCs with technical assistance in the design and implementation of trade policy. However, while LDCs do require technical assistance, this package of policies will provide little direct assistance for the private sector. *Little remaining in the current approach of the international community towards the problems of LDCs or small vulnerable states would directly address the fundamental constraints to the development of the private sector in those societies. The unstated assumption is that dealing with the fundamental constraints remains the responsibility of national governments and is to be dealt with solely through structural adjustment programmes.*

A series of consistent and positive interventions that can assist small highly vulnerable states in the development of their private sector does remain. However, in any such intervention it must be recognised that in the case of some countries their level of development and the extent of their disadvantage will mean that no immediate outcomes can reasonably be expected. Four essential components of international intervention will assist small vulnerable states in making the adjustment to a more competitive global economy. These interventions include:

- ***Market oriented reforms through structural adjustment (World Bank/IMF)***
  All further interventions by national governments and the international community would prove ineffective in the absence of a strategy assuring that small vulnerable states provide a suitable national policy framework. It must be one in which the private sector can thrive, which means it must include competitive exchange rates, a stable macroeconomic environment, transparent investment rules and a predictable legal framework. As has been argued above, this type of intervention is a necessary condition for the proper development of the private sector in small states

However, some multilateral institutions, increasingly faced with the failure of the private sector to respond to a series of difficult but otherwise politically feasible structural reforms in small states, argue that deeper and more politically sensitive and intrusive structural adjustments are now necessary. Only such measures will be able to ensure that investors will be willing to risk capital in such small highly vulnerable states. In the context of the Pacific, the Asian Development Bank (ADB) has argued that following structural adjustment programmes in Vanuatu and the Cook Islands, which addressed many of the problems of fiscal discipline but failed to attract foreign direct investment immediately, deeper structural reforms are needed. While no formal policy position has as yet emerged from the ADB, it is being increasingly argued in ADB publications and by ADB officials that land reforms and reforms of the labour market are now necessary conditions before investment will occur.

As desirable as land reform may be for the creation of a properly functioning market, in most Pacific island countries land is owned collectively by traditional land-owning groups. This issue is, without doubt, the most politically sensitive issue in the region. In the past, even relatively limited attempts at land registration have led to violence, as in the case of Papua New Guinea in 1996. *At this stage of the region's development, attempts by the international community to force in the Pacific islands land reform that will result in the creation of a market for land would run the very serious risk of politically destabilising the region.*

- ***Technical assistance for niche market development (ITC/UNCTAD)*** One of the more important interventions of the international community has been to enhance the capacity of UNCTAD and ITC to assist LDCs, as well as small vulnerable states, to obtain international market intelligence directly through ITC facilities and training as well as new instruments such as Trade Point. Together these facilities are an important adjunct to the facilities that are available to LDCs and small vulnerable countries for finding and exploiting niche markets.

  The development of the market intelligence necessary for the development of niche markets extends beyond just the use of formal facilities. The experience of countries that have been successful in the development of this type of product shows that developing personal and business connections is crucial to the success of investment and the marketing effort. Thus facilities assuring that members of the business community are able to seek out connections in other countries would greatly facilitate the development of niche market activities.

◆ ***Market friendly investment preference facilities for the replacement of trade preference (IFC)***

Trade preferences that developed with the GSP and regional trade preference arrangements, such as Sparteca, Lomé and CBI, were always meant to be 'investment preference' rather than 'trade preference', as it is known. It was the intention of the international community to provide a signal to both domestic and foreign investors that they would receive a subsidy through exemption from or lowering of duty rates on their exports to developed countries. This would be the case if they invested in export oriented industries in those developing or least developed countries that benefited from these schemes. A clear and at times distorting message was thus sent to investors that they would receive a *continual* flow of revenue through lowered tariffs if they continued to invest in and export from those countries that were beneficiaries of the trade preference regime. While trade preference regimes had enormously beneficial effects for small vulnerable states receiving benefits, they provided little incentive for firms to become more efficient, as they could rely upon the continual subsidy to maintain profits in the face of ongoing inefficiencies.

Given that margins of trade preference are eroding, this instrument will, over time, decrease substantially in commercial value as an incentive to investors to locate facilities in developing countries. Then it may prove useful to consider engineering a financial instrument that is more market friendly than trade preference but achieves the same objective. One alternative modality for achieving this is through a direct *investment preference scheme*. The two components of such a scheme would provide:

- low interest, long gestation loans; and
- highly concessional risk capital funds.

Both components could operate through the IFC. The facility would operate:

- through IFC directly, for large projects;
- through partner commercial banks, for smaller projects that could not be handled by IFC; and possibly
- through NGOs, for a micro-project component.

Some of the problems associated with such a fund are dealt with in Annex 2.

◆ ***Recognition of the need to enhance Special and Differential Treatment for small vulnerable states (WTO)***

The next section of this paper will argue that one of the key compo-

nents of a consistent package of policy instruments to assist small vulnerable states is the recognition at the WTO that their disadvantage is of such an order of magnitude as to place them on the same level as least developed countries. To recognise small vulnerable states in these terms would have two obvious benefits. It would enhance their ability to receive WTO-consistent trade preferences; and it would also allow access to key exemptions from WTO disciplines necessary to achieve export- oriented development, such as those found in the Agreement on Subsidies and Countervailing Measures (ASCM). The definitional issues of how to define a 'small vulnerable state' are also addressed below.

Conclusion

An appropriate policy mix to assist the development of small vulnerable states might well be provided by international community intervention. Such an intervention might focus upon feasible structural adjustment programmes, along with the provision of technical assistance in the development of niche markets, as well as market-friendly investment incentives to locate in small vulnerable economies. The current approach of the international community rests almost entirely upon the twin planks of technical assistance and structural adjustment. Until the international community recognises that this constitutes an inadequate response to the often substantial exogenous constraints faced by highly disadvantaged small states, the sole response to the failure of structural adjustment to attract investors will be to seek even deeper and potentially destabilising structural adjustment.

WTO Issues for small vulnerable states

Introduction

It was suggested above that one of the more important interventions of the international community to assist the development of small vulnerable states is to recognise their need for improved special and differential treatment. This is the issue that will be primarily addressed in this chapter. The Millennium Round issues will be addressed briefly at the end of the chapter.

The improvement of SDT for small vulnerable states immediately raises a host of important questions, which include:

- What real economic and political benefit for SVS is there in attempting to enhance SDT?

- Is it politically feasible to attempt to negotiate any heightened SDT?
- What is an appropriate definition of small vulnerable states that is likely to minimise political resistance to enhanced SDT?

The question of whether small vulnerable states are economically disadvantaged will not be discussed here. A substantial economic literature demonstrates that small states are highly vulnerable to external shocks. Moreover, this paper has already suggested that small vulnerable economies have a particularly difficult time adjusting to global change. What will be argued is that there exist particular SDT provisions for LDCs that would be useful in assisting SVS in their transition to a more open global economy.

It is important to begin by noting that the WTO already provides for SDT for small vulnerable states. As all such states are categorised as either developing or least developed, the existing WTO SDT provisions are applicable. However, it has been argued that SVS are particularly disadvantaged in their ability to adjust by virtue of the combination of circumstances they confront. This paper argues that enhanced SDT at the WTO is needed to assure that small states are represented and are able to participate effectively in the WTO process. The use of SDT provisions has been the subject of considerable debate among trade lawyers and economists, in particular whether trade preferences have been of any benefit to the LDCs and developing countries that have been beneficiaries of these schemes.

The issue of particular SDT provisions as discussed below relates to some, but by no means all, the numerous SDT provisions in the various Uruguay Round agreements. There is discussion of how SDT for SVS will deal mainly with the political marginalisation of these states inside the WTO. The question of how to provide such treatment to these states is considered and then three key components of SDT, relating to membership, accession and dispute settlement, are examined. Without reform in these areas small vulnerable states will remain politically handicapped and have only the most limited ability to participate in the WTO process.

Small vulnerable states must recognise that explicit recognition of their status at the WTO, in whatever form, is likely to meet with considerable political opposition inside the WTO. Some least developed countries would see any recognition of small vulnerable states in a category similar or identical to their own as a threat to the dwindling technical assistance budgets provided by developed countries. Some larger developing countries would see this as a threat to their own trade position and some of the large developed countries would see this as further erosion of the unity of the

multilateral system. Nevertheless, while there are substantial political costs, there are also substantial and possibly immediate economic benefits to small vulnerable states from pursuing this particular course of action.

Why enhance SDT treatment for small vulnerable states?

The principal reason for seeking enhanced SDT treatment for SVS is that this would help deal with both economic and political marginalisation. The analysis below sets out why enhanced SDT would be such an important benefit. Justification of the enhanced SDT treatment is predicated upon the assumption that SVS, however these are defined, achieve an SDT based upon equivalence to LDC status in all WTO agreements. This immediately raises the issue of definition and the politically perplexing and possibly fatal problem of those 'border cases' that will be included and excluded from the SDT provisions. Unless a politically feasible way is found to deal with the issue, then the arguments about the benefits and costs of SDT to developing and least developed countries will remain purely academic.

Special and differential treatment and economic marginalisation

SDT provisions of the WTO fall into two main categories. The first are those that allow departures from Article I provisions. This has come to include the GSP and the regional trade preference arrangements. The second includes particular SDT provisions available to developing and least developed countries in various Uruguay Round Agreements. The extension of LDC equivalent rights to SVS would strengthen existing trade preference regimes and, as we shall see, obviate the necessity for REPA arrangements in the Pacific and the Caribbean for virtually all countries. The extension of SDT provisions in several agreements will have enduring implications for SVS in the way in which they develop.

◆ *Trade preferences and SDT provisions*

The SDT provisions currently available in the WTO agreements are not viewed with great favour by some of the larger WTO members. These critics have consistently argued that SDT provisions are unnecessary and often unhelpful as they allow developing countries to avoid making the painful economic choices necessary in order to assure their competitiveness and their long term economic development (Goldin, Knudsen and Van der Mersbrugghe, 1993). Some academics and developed country WTO members have argued that some aspects of SDT, such as the GSP and the regional trade preference regimes, have been particularly unhelpful because they have facilitated the development and perpetuation of uncompetitive industries.

There is some disagreement among economists about whether trade pref-

erence regimes, as the most overt manifestation of SDT, have had a significant impact upon development. Nevertheless, there has been little doubt about the economic benefits of this instrument in the capitals of those small developing countries that have benefited from it. The reason for this view is that those societies where the preconditions for successful use of trade preference exist have been seen by policy-makers as exhibiting one of the few commercial advantages that SVS possess as a location for investment. Trade preference as an instrument of development has been successful in inducing export diversification in only a relatively small number of countries (McQueen and Stevens, 1989). Some but not all of these countries are small vulnerable states. Two countries that have made most active use of these preferences have been Fiji and Mauritius, which have developed similar economic structures. That the number of countries benefiting greatly from trade preferences has been limited does not imply that trade preferences themselves have been unimportant. It implies only that the incidence in any particular country of those combined economic conditions necessary for taking advantage of export diversification through trade preference is exceptional. To those countries where these conditions do exist, trade preference has been of enormous benefit in providing the subsidy to industrial transformation that is very often necessary to overcome the costs of beginning new export- oriented activities in small remote and highly vulnerable countries.[1]

The experience of the SVS that have succeeded in making extensive use of trade preference arrangements suggests that several conditions appear to be necessary for the satisfactory marriage of the conditions existing in a particular country and trade preference regimes. These include:

- an investment and macroeconomic climate that is conducive to and welcoming of investment, both domestic and foreign;
- factor markets, in the relevant factors, that can provide basic inputs at prices close to internationally competitive levels;

[1]An analogy to bio-history may explain the apparent contradiction in the observation that the success of trade preference is limited but often overwhelming in the case of those countries where it has been successful. The eminent bio-historian Jarret Diamond has noted that throughout history human beings have been able to domesticate only a score of animal species. The marriage of qualities of a particular animal species with human needs and capabilities in animal domestication is well known. However, if one were, purely on the basis of the number of species domesticated as a proportion of the total number of animal species in existence, to reflect on the success or otherwise of human efforts at animal domestication, then one would have to conclude that animal domestication was statistically insignificant and a thoroughly unsuccessful experiment. Such a conclusion would be erroneous, as the relatively limited number of successful attempts at animal husbandry totally transformed human existence, much in the same way as trade preference did in the few cases where there was a coincidence of conditions needed to make trade preference successful.

- a natural resource supply where a substantial margin of preference relative to cost disadvantage exists.

If this list constitutes those qualities required for the successful exploitation of the opportunities created by trade preferences then it is not surprising that few developing and even fewer least developed countries have made use of them. One of the stylised facts about trade preference regimes has been that they have tended to benefit the more developed countries and not the least developed. This observation would appear to be consistent with what has been argued above, because only in those more developed countries where there are sufficiently developed factor markets, especially for skilled labour, management and entrepreneurship, does diversification into export sectors where significant margins of trade preference are available occur. The least developed, unless they have an abundant supply of natural resources, are not likely to be beneficiaries of this trade instrument.

This raises a logical question: if LDCs have tended not to take advantage of such trade preferences because they lack the economic preconditions, why preserve this trade instrument for a group of countries that are unlikely to make immediate use of it? The reason is that even though trade liberalisation is diminishing, the commercial value of trade preference margins remains significant and will continue to be commercially significant in the foreseeable future. Thus as these LDCs and SVS develop and emerge, this instrument will become more significant in stimulating export oriented development.

The reason further highlights the definitional problem. The fact that the more advanced of the SVS and other developing countries have made extensive use of this instrument highlights the need to preserve it for a wider group of WTO members by ring-fencing that group of countries that find this instrument useful for the purposes of trade diversification. Thus a new, more inclusive definition of highly disadvantaged WTO members, one that includes the LDCs as well as the SVS, would serve to provide a basis for alleviating economic marginalisation of this group in future.

One of the most obvious and valuable benefits of extending to the SVS the existing SDT treatment available to LDCs would be that the European system of trade preference under the Lomé Convention, which has been amongst the most important to developing countries, would be available to small states without reciprocity. Hence regional free trade areas would not be necessary for the countries of the Pacific and the Caribbean.

◆ ***Uruguay Round Agreements and SDT***

The facilitation of trade preferences cannot in itself constitute an adequate justification for the very great expenditure of political capital that would be necessary to make a fundamental change in WTO rules by recognising yet another group of disadvantaged states. There is a secondary and more enduring reason why the SVS should pursue an enhancement of their existing SDT rights at the WTO and why it would be of particular economic benefit to these states. The provisions of several crucial agreements, the most important of which is the Agreement on Subsidies and Countervailing Measures (ASCM), contain measures that exempt least developed countries from key disciplines. Under the terms of Annex VII of the ASCM, LDCs and countries with a GNP/capita less than US$1,000 are exempted from the export subsidy prohibitions of the ASCM. Export subsidies are frequently necessary in developing new export industries and the extension of the exemption for the LDCs to small vulnerable states would be of enduring economic benefit.

Several WTO agreements recognise small producers and small countries, explicitly or implicitly. One that is of particular importance and reflects how SDT provisions can be of direct economic benefit to SVS is the Agreement on the Implementation of Article VI (Anti-dumping). This agreement provides for important *de minimis* provisions that specifically benefit small suppliers and small countries. The *de minimis* volume provisions of the anti-dumping code are not based on LDC status. They are nonetheless a most important demonstration of the potential for using special provisions benefiting small states and small producers as a logical basis for extension to other agreements. Under the provisions, individual firms with less than 3 per cent of market share, or firms that have collectively less than 7 per cent (Article 5.8), are considered below the threshold where anti-dumping action can be taken. This is one of the areas where there exists an explicit recognition of smallness. *The resulting benefit is the insulation from the (often devastating) effects of the application of an instrument of protectionist trade policy, a strategy most frequently used by large developed countries.*

Special and differential treatment and political marginalisation

A powerful reason for extending SDT to the SVS lies in strengthening the political authority of the multilateral trading system. Many large WTO members do not accept SDT and argue that the interests of all WTO members are best served when the full disciplines of the WTO are applied to all members equally. The fundamental presupposition of a multilateral trading system is the equality of nations and, by extension, the treatment of their exports. This is a basic principle of International Public Law. While the principle of complete equality of treatment may be debat-

able when it relates to the export of goods and services, it appears fundamentally flawed when one views it from the perspective of very small vulnerable states attempting to negotiate with large powerful WTO members. *In situations like this, it will be argued, where very large and very small WTO members are forced to negotiate, the inequality between nations is obvious. In fact it is so glaring that maintaining the political and legal fiction of equality implicit in WTO practice serves only to bring the multilateral trading system into disrepute.*

The multilateral trading system will not be served by assuming that large and small nations are equal in terms of their capacity to trade or to adapt to global change; and most particularly not in their ability to interact with other members inside the WTO. It is best served by a system that accepts that there are small vulnerable states requiring assistance similar in kind to that accorded the least developed. They need special treatment as a transitional arrangement until they are able to graduate to a level of development where that assistance is no longer necessary. It is thus in the interests of developed countries to pursue the strengthening of SDT provisions for small vulnerable states: these constitute a means of strengthening the multilateral trading system by demonstrating its flexibility in dealing with those less capable of adapting to global change. What follows deals with the issue of SDT treatment in the interaction with and participation in the WTO process and does not address specific SDT provisions with regard to particular trading arrangements.

A new round of multilateral trade negotiations is set to begin in the final quarter of December 1999. The commencement of these talks brings to mind several important areas where small and highly vulnerable states may be able to have an impact upon the negotiations, to ensure that their interests are in fact protected. The issues discussed relate only to the concerns of small vulnerable states, as they face particular difficulties simply by virtue of their size.

◆ ***Membership fees and WTO participation***

Perhaps no issue more than the question of the membership fees into the WTO so clearly depicts the gap in the perception and understanding of the depth of the problems and constraints of small and vulnerable states (see Annex 1). At present a new member, upon joining the WTO, must pay a minimum (based on a minimum of 0.03 per cent of WTO member trade) of CHF38,000 per annum in 1999 plus an equivalent amount, on a one-off basis, into the WTO capital fund. This appears a small amount to pay for the benefits of the multilateral trading system. However, for the smallest developing country acceding to the WTO, which is currently Seychelles with a population of 74,000, the fee per capita would be

CHF0.50. If this were the per capita fee paid by US citizens, it would obviate the necessity for collecting membership fees from any other WTO member, as the budget would be fully paid. In the case of Seychelles, which has a relatively high GNP/capita, this may not prove problematic, but in the Pacific, where three small island countries (Tonga, Samoa and Solomon Islands) are in the process of accession, the removal of the existing floor on membership fees (0.03 per cent of world trade) or its decrease to UN General Assembly equivalent levels (0.003 per cent of world trade)[1] would constitute a saving of approximately CHF165,000 for the five countries involved (Solomon Islands and Fiji are members of the WTO). This would be sufficient to pay the salary of a joint Pacific islands delegate to the WTO. For example, no Pacific island country has representation in Geneva. The existing WTO membership fee floor is not only regressive and a burden upon small states, it acts as a further barrier to their membership. It should also be kept in mind that the WTO until very recently prohibited members who were in arrears from receiving particular forms of technical assistance. Hence the floor constituted a double penalty for small states, which are frequently those in greatest need of such technical assistance.

It is worth comparing the fiscal burden of WTO membership fees on large and small developing countries. In 1999 India will pay approximately CHF923,000 to be a member of the WTO. This constitutes an impost of CHF0.001 per capita. Tonga, which, like India is also a developing country, is seeking membership. If its accession is complete in 1999 it will pay CHF38,000 to be a member, an impost of approximately CHF0.38, or 380 times more than India.

In the case of small and highly vulnerable countries such as those found in the Pacific, Caribbean and Indian Oceans, development of a mechanism by which *collective representation can be regularised is required*. This would facilitate SVS participation in the WTO. The problem is not entirely the making of the WTO; it is in part a result of the unwillingness of small states to co-operate at such a level. In theory, co-operation is possible. However, *regional organisations, such as the South Pacific Forum, are in effect prohibited by larger WTO members from having even observer status at the WTO's General Council.*

◆ ***Accession process***

Under the terms of WTO Article XII, 'negotiations' on the terms of accession by an applicant and existing WTO members are supposed to

[1]In the UN General Assembly, the floor on membership fees is based on 0.003 per cent of total UN member GDP.

occur. It is not widely understood by those who are not involved in accession that those countries seeking to accede to the WTO have no WTO rights and must negotiate the terms of their accession on a case-by-case basis. The members of the Working Party formed by the WTO to consider an applicant may demand in terms of trade concessions whatever the bargaining power of the parties permits. Given that an applicant has no rights and there are no rules, as WTO law does not extend to non-members, then what follows is a negotiation between what is often a very small state and existing WTO members. Thus on one side of the table will be the applicant, for example Seychelles, Vanuatu, Tonga, which is expected to bargain with the WTO members, which always include the *triad* – USA, EU and Japan – and whichever other WTO members have trading interests. It is difficult to define this unequal process between such small applicants and the world's most powerful trading nations as negotiations, a fact that has to be recognised by WTO members in order to accelerate the reform of accession.

Two factors greatly complicate the accession process. The first is that two very large and important trading countries, China and Russia, are now seeking accession to the WTO. As the process is highly legalistic and the only real guide is the precedent established by previous negotiations, the larger WTO members are quite explicit that they will not grant even SDT rights to LDCs because this may create a precedent for negotiations with China and Russia. This explicit recognition of precedent extends beyond the *triad* to Cairns Group members, which have stated in press releases that they will not allow accession of any country that uses export subsidies, especially in agricultural trade. The second factor that complicates the accession 'negotiations' is that as negotiations approach a new round, existing WTO members demand ever higher standards as heightened disciplines are expected from the new round.

The difficulty in dealing with accession is that countries and customs territories that are already members of the WTO, even developing and least developed members, are unwilling to expend political capital devising new rules to assist those who are not members and therefore cannot benefit their trade interests. At the 1997 WTO Ministerial Conference, the Solomon Island Minister of Commerce and Trade recommended a resolution to this problem that would see the accession process divided between the accession of LDCs and others. He recommended that *all SDT rights of LDC WTO members be extended automatically and without negotiation to all LDCs* in the process of accession. This would in effect differentiate the accession process of LDCs and others.

In terms of small states what is needed is recognition that no negotiation

between a small highly vulnerable economy and existing large WTO members is possible and that differentiation should not just be on the basis of LDC SDT provisions. Rather, when WTO membership is sought by a country that is an LDC or has a trade volume at the floor level recognised by the WTO Finance Committee (currently 0.03 per cent of WTO member trade), either a *committee of experts or the Accessions Division itself should, in consultation with the applicant, examine the trade regime of the applicant. If necessary, this body could recommend changes in that regime that are consistent with the applicant's development status and existing WTO rules.* Moreover, bilateral negotiations over tariff *bindings should be limited only to those commodities in which a demandeur has the right to initial negotiating rights by virtue of being a principal supplier* as defined by the WTO. Such a process would greatly accelerate the accession of LDCs and small vulnerable states.

◆ ***The Dispute Settlement Mechanism***

The single most important development of the Uruguay Round was the creation of the strengthened DSM. This, possibly even more than the liberalisation process itself, has reshaped the thinking of all WTO members. In many ways the experience of the DSM has demonstrated that smaller WTO members, such as Guatemala, have been able to mount successful challenges against the very largest WTO members such as the USA and the EU. This in itself is viewed as clear proof of the success of the DSM, a convincing demonstration that the rule of law can be exercised between small and large nations equally. The Guatemalan experience is in a sense unique and the DSM remains very much an instrument of trade policy of those larger WTO members better able to afford and make use of it. The fact remains that no least developed country[1] has ever in the history of the GATT or the WTO brought a dispute to the DSM. There would appear to be at least three reasons for this:

- LDC and small and highly vulnerable country trade is such a small proportion of global trade that it is statistically less probable that a dispute with other WTO members would occur. The fact that no current LDC has been involved in a dispute as either litigant or defendant suggests that this is an important consideration;
- The legal costs of a dispute are substantial: the figures frequently used at the WTO vary from US$1.5–6 million for legal costs, plus the costs of travel and time of government officials. For small states the DSM would clearly be financially inaccessible. The WTO does provide technical assistance to LDCs but it is in the form of advice from one

[1]By LDC is meant any country that is on the current ECOSOC list of LDCs.

of the WTO experts. While these experts are very valuable, the assistance provided does not extend to paying the costs of legal advice. The establishment of a legal aid trust fund at the discretion of the Director General of the WTO for use in assisting LDCs and small highly vulnerable states in the event of a dispute would increase the capacity of those states to use the DSM to advance their trade interests;

- WTO disputes rarely result in retaliation, which only occurs in the event that one party refuses to bring its trade regime into conformity with its WTO obligations. However, such an outcome in the event of a dispute between a complainant small state and a large developed WTO member renders the DSM ineffective for the purposes of resolving disputes between the smallest and larger WTO members. Retaliation, irrespective of the circumstances, is widely recognised as bad economics, as those who suffer by it are the citizens of the retaliating WTO member. It is clear that the international community is unwilling to abandon retaliation and move completely to the rule of law under a system of binding arbitration based on financial compensation. One solution to the dilemma faced by SVS would be to move away from the concept of retaliation in the event of a dispute between an LDC or small highly vulnerable state and a developed country WTO member. In such a case the transgressor would agree to binding arbitration to determine financial compensation and the complainant would waive the right of retaliation.

The WTO and the political economy of SDT

Assuming that the global community accepts the proposition that the small vulnerable states require some form of special treatment to assist them in their participation in the global trading system, the normal modality employed in the past has been the concept of SDT. The WTO only formally accepts the group of least developed countries in terms of offering special treatment. The WTO accepts the UN list of LDCs as defined by ECOSOC for the purpose of application of SDT provisions. Diminished SDT provisions for developing countries are also in existence. However, that category exists by self-election in the WTO. For example, until very recently countries such as Singapore, Israel and even South Korea, which has recently joined the OECD, have chosen to define themselves as developing countries. This failure of the WTO to define developing countries in an unambiguous manner has further served to erode confidence in the principle of SDT.

Most small and highly vulnerable states that are members of the WTO already enjoy SDT by virtue of their developing country or least devel-

oped country status. However, most small and highly vulnerable economies are not defined as LDCs by ECOSOC even though their size, vulnerability and economic adjustment problems suggest that they confront problems greater than other countries of a similar development status. *In terms of SDT provisions of the WTO agreements, the optimal negotiating outcome for small vulnerable states is recognition that their smallness and vulnerability make them special, putting them in a category similar to LDCs. However, even if the SVS seek formal recognition only for the purposes of membership fees, accession or modified DSM rules, rather than SDT-equivalence to LDCs, then there will still be a need for a clear and unambiguous definition of small vulnerable states.*

There are a number of alternative strategies for increasing the special and differential treatment of small vulnerable economies. There is also the possibility of accepting existing WTO definitions as a basis for small states differentiation. These include:

- ***Introducing the concept of 'small, highly vulnerable states'***
  There are essentially two ways of trying to introduce this category into the WTO as a basis for SDT privileges:

  - *Via* ECOSOC. It may be politically feasible to have the definition of LDC so amended by the use of the vulnerability index and other measures that many, if not all, small vulnerable states will be defined as LDCs. This would present the WTO with a *fait accompli* as it has always accepted the ECOSOC definition of LDC. The question arises whether small states are willing and able to employ at the UN the political capital necessary to achieve this objective. Countries can reasonably expect political resistance at the UN from both larger developed countries and those at the margin that might be excluded. However, resistance at the UN may be less than at the WTO.

  - *Via WTO directly*. There are two ways of achieving this goal directly – either by creating a separate category of small vulnerable states or by seeking treatment on a par with LDCs.

  - The first of these would mean *establishing a separate category of 'small and highly vulnerable states'* and then establishing a separate, i.e. third, type of SDT treatment. This tactic has only the remotest chance of success and should not be pursued as it will not be supported by other larger, developing countries in the WTO.

  - The second, slightly more politically feasible, option is to seek to have *all 'small highly vulnerable states' treated the same as LDCs*. While this is more feasible than developing a third category, it must be recalled that the WTO system is based on consensus. It is a polit-

ically difficult forum for what would be a divisive issue. Given that larger developing countries such as Brazil have traditionally been hostile to the introduction of new graduation concepts they, along with other large developing countries, are likely to oppose such an expedient.

- ***Acceptance of current status, i.e. LDCs and developing countries*** Given the high political costs of developing new groups of disadvantaged WTO members, small vulnerable states may wish to avoid trying to introduce a new category or even a sub-category of 'small vulnerable states' at the WTO. SVS that are members of the WTO may wish to work together with developing and least developed partners and use the Millennium Round to try to improve the SDT rights for all developing and least developed countries.

  The cost of taking this position is that there would then be no recognition of the particular problems of small vulnerable states.

- ***The WTO trade floor of 0.03 per cent of WTO member trade used by the Finance Committee of the WTO*** constitutes an already accepted, if only implicit, definition of 'small' and this could be used as a basis for defining small for other purposes in the WTO. As this is already a politically accepted definition it will be explored below.

It remains a matter of political calculus whether the SVS consider that the expenditure of political capital on obtaining acceptance of the category is justified. If this is seen as politically worthwhile, the least cost strategy for enhancing SDT treatment for small highly vulnerable states may be in altering the ECOSOC definition of LDCs by the use of the vulnerability index. However, during a new round of multilateral negotiations, the direct route through the WTO may also be feasible. Given the system of consensus that has emerged at WTO it would be difficult, though not necessarily impossible, to introduce SDT treatment for small vulnerable WTO members directly.

'Border' issues and the definition of 'small vulnerable states'

If small vulnerable states chose a path involving an acceptance of the existing WTO development status taxonomy for SDT purposes, i.e. LDC, developing and developed, then they will have to develop an appropriate and politically acceptable definition if they wish to have any acceptance of their status. *It is perhaps worth beginning by saying that there exists no unambiguous or politically simple choice of definition – each will involve difficult decisions and choices.* The fact that the WTO system is now based upon consensus makes it difficult to see how any definition will be

acceptable to all members of the WTO. The more inclusive the definition of relatively high-income small vulnerable states, the more opposition there will be from large but relatively low-income developing WTO members. The more it excludes these high-income border cases or outliers, the more they will object to the definition. *The question of definition is the rock upon which the whole issue of SDT provisions or even the recognition of small vulnerable states may founder.*

Demographic definitions

Since the 1960s the most common definition of 'small' employed by the international community has been based upon population. The modal definition has been based upon the threshold of a population of one million. This, however, was increased by the Comsec (Commonwealth Secretariat, 1997) to 1.5 million, largely because of population increase in those small countries. The Comsec definition also includes countries such as Jamaica and Papua New Guinea, which have populations well in excess of this threshold but have other characteristics similar to small countries. Some definitions based purely upon demographic considerations, such as those employed by academics, argue that the definition of small should be 3 million, without further justification than is presented by those employing 1.5 million. Such definitions are of little use for the purpose of achieving SDT for small states at the WTO, because such purely demographic definitions will throw up anomalies of high-income countries that would be completely unacceptable to most WTO members.

A definition of 'small' based purely upon demographic measures is likely to be subject to the fatal flaw of not relating smallness to any economic variable. The key to *a politically acceptable definition* of smallness at the WTO must lie in *simplicity* while simultaneously assuring that it does not result in *anomalies* like those that allow WTO members such as Lichtenstein, Luxembourg or Singapore to be in a position to receive SDT equivalent to LDCs. Since such an outcome would, quite understandably, not be acceptable to most WTO members, demographic solutions to the definitional issues should not be sought by small vulnerable states in the WTO context. This is not to suggest that demographic solutions are not useful in other contexts but certainly not in the context of the WTO. An *economic definition, not a demographic one, is needed* because the problem of adjustment of small vulnerable states to a liberalised economic environment is essentially an economic problem.

The vulnerability index

One possible economic foundation for dealing with the question of smallness is through the vulnerability index. In the final analysis what type of

vulnerability index is used will also be a political issue. An enormous amount of research has been undertaken on the vulnerability index by academics (Briguglio, 1995, 1997; Chander, 1996), the Commonwealth Secretariat (Commonwealth Secretariat, 1997, 1998a; Wells, 1997) and UNCTAD (Atkins and Mazzi, 1998; Weston, 1994). While the vulnerability index is extremely useful as a tool, it is predicated upon macroeconomic aggregates and hence very often fails to come to terms with the existing microeconomic problems of enterprises operating within the context of small vulnerable states. The use of the vulnerability index by ECOSOC as a tool to define 'least developed' in a rigorous manner may help in the recognition that some small states do in fact suffer from economic constraints not evident through more conventional but less sophisticated macroeconomic aggregates such as GDP per capita. However, within the context of the WTO, the vulnerability index also creates anomalies that would be unacceptable to WTO members, such as the fact that Singapore is the tenth most vulnerable country in the composite vulnerability index.

The justifiable reply of economists who work with this index is that the vulnerability index measures, as the name implies, vulnerability to external shocks and changes. It is not meant to be a proxy for either poverty or disadvantage per se. Nevertheless, it is precisely the case of countries such as Singapore that WTO members would point to as the sort of anomaly that would make the vulnerability index unacceptable as a sole basis for a definition. This is not to suggest that the vulnerability index is flawed. The problem is, rather, that it will not act as a proxy for the phenomenon that WTO members would look for, i.e. a list of countries that are not least developed but are nonetheless handicapped in terms of their ability to adapt to a liberalised global environment.

Share of world trade

The WTO already implicitly recognises small states. Several definitions and applications of SDT imply recognition of small producers. This is true in the *de minimis* provisions of Article 5.8 of the Agreement on the Implementation of Article VI (Anti-dumping Code). In other agreements, such as the Agreement on Textiles and Clothing, there are provisions for SDT, not only for LDCs but also for small suppliers (Article 6.b), which do not differentiate between the SDT treatment that is to be afforded to an LDC and that afforded a small supplier. In short, the concept of small producers and suppliers is by no means without precedent at the GATT and the WTO.

The WTO has an implicit and accepted definition of a small member used by the Finance Committee, which sets the budgetary contributions

of members. All members pay according to their share of world trade,[1] but those small states whose share of world trade is less than the threshold of *0.03 per cent of world trade* pay a floor contribution. Thus small least developed countries will pay a disproportionately high share of the budget in comparison to large developed countries.

The positive side of this definition is that virtually all the Commonwealth states defined as small are included except Papua New Guinea in the Pacific, Jamaica in the Caribbean, Mauritius in the Indian Ocean and Botswana in Africa. High-income countries such as Brunei, Cyprus and Malta would also be excluded. The 0.03 per cent threshold has only one anomaly and that is Liechtenstein. In order to eliminate such anomalies there must be *double criteria* and only small vulnerable *developing countries* should be included.

This second criterion, i.e. developing country, would only be of use in excluding the one anomaly that exists in the current implicit definition of small, which is set at 0.03 per cent of WTO trade. As we shall see, an attempt by the SVS to modify this definition by raising the threshold to include the 'border cases' of Papua New Guinea, Mauritius and Jamaica would create anomalies. Such anomalies would include countries that, using the self-election principle to define themselves as developing, for example Brunei, will then have access to the SDT rights of LDCs. This would probably be unacceptable to WTO members.

What would be the net economic impact of extending the LDC SDT privileges using the 0.03 per cent of world trade threshold? The 45 WTO members that are implicitly defined as 'small' are responsible for only 0.481 per cent of world trade. Twenty-six of these WTO members are LDCs and are together responsible for 0.25 per cent of world trade. Thus the net increase in world trade that would be subject to LDC SDT provisions if this proposal were accepted by the WTO would be 0.23 per cent of world trade. At present, agriculture and textiles, which still remain outside strict WTO disciplines and benefit large developed countries, constitute 12 per cent and 7 per cent of world trade respectively. Some large developing countries would raise the counter-argument that although this is a small proportion of world trade in those sensitive sectors where there are tariff peaks, for example clothing and footwear, the impact of the extension of LDC SDT rights would still be significant and would erode their relative market position.

As an illustration of the type of problem that would be created by raising

[1]The definition of trade used by the WTO is the total of imports and exports of goods and services as provided by the IMF.

the threshold, it is worth considering the case for raising the threshold to, say, 0.05 per cent of world trade. In this situation all the Commonwealth small states would be included but the number of 'anomalies' would also increase. High-income countries such as Brunei, Iceland and Malta would be eligible for LDC status. As Malta is seeking EU membership, clearly a definition granting them LDC status would not be appropriate. In fact this reflects the dilemma of any such definition. The more restrictive the definition the fewer the anomalies that are created but the less inclusive it is of 'deserving cases'. It is precisely these border cases that pose the principal problem for finding a simple definition for small vulnerable economies. If a restrictive definition is employed, countries like Jamaica, Mauritius and Papua New Guinea would be excluded. They are therefore unlikely to support such a definition.

In the event that a trade-based criterion for defining small states at the WTO is accepted, then some consideration of the conditions of graduation is necessary. If a country's exports rise above the threshold for a five-year period, then graduation should occur. Such a period is necessary to avoid the possibility that commodity price fluctuations cause a short-term rise in the share of world trade.

Self-election

A further option worthy of consideration is that of allowing members to define themselves as 'small vulnerable states'. However, if the definition is to be associated with enhanced SDT provisions, equivalent to LDC status, then this would be acceptable neither to the LDCs nor to the large developed WTO members as it would clearly undermine the multilateral trading system and the technical assistance that LDCs currently obtain. If it were to be associated with SDT provisions of developing countries it would be of no economic benefit as all SVS receive LDC or developing country SDT provisions under the WTO agreements. Moreover self-election, which is the basis for defining developing countries, is arguably one of the significant weaknesses of the system of SDT as it creates anomalies such as have been discussed above. Such an approach seems of limited value.

In the final analysis the choice of definition of small vulnerable states is a political matter. Simple economic definitions that exclude high-income anomalies are the ones most likely to meet with success. However, it should be recalled that even if an inclusive but simple definition were to be found for small vulnerable states, there will be border cases and there will almost certainly be political resistance from those larger developing and least developed countries that will consider themselves disadvantaged by such arrangements.

Millennium Round issues

By the final quarter of 1999 a new round of multilateral trade negotiations may be launched. The agenda for the Denver Ministerial Conference of the WTO, which is likely to start the round, is unknown at the time of writing and there is as yet no agreement among WTO members on the subject matter of the negotiations. Built-in agenda issues are discussed below as there is no consensus on the so-called 'new issues' and WTO members will almost certainly start negotiations on the built-in agenda although there is every chance that they may leave the contentious 'new issues' for subsequent negotiations.

Technique of negotiations

- At the 1996 Geneva Ministerial Conference President Clinton suggested a new type of shortened negotiations, which has been called the 'round-up' (Schott Proposal), where areas of agreement are found and smaller quicker rounds are negotiated.
- *The 'round-up' proposal runs the risk of marginalising the developing countries even further.* In the Uruguay Round, the ability to extract concessions from developed countries in key areas such as textiles ultimately rested upon the ability to halt progress in the negotiations until such time as there was complete agreement on the entire agenda.
- It is possible that given the highly contentious trade issues that may appear on the agenda, for example trade, environment and labour standards, there will develop a series of plurilateral rather than multilateral agreements. In the Tokyo Round several plurilateral agreements were signed, such as the Agreement on Customs Valuation and the Tokyo Round Subsidies Code. These became multilateral agreements during the Uruguay Round. *Plurilateral agreements should be avoided* by developing and small highly vulnerable states as they will also diminish their bargaining power and undermine the multilateral trading system.
- The series of service sector agreements on information technology, stand-still on e-commerce and telecommunications have been plurilateral in nature. However, if, in the rush to see quick results, this plurilateral approach should be extended to trade in goods with the introduction of the APEC EVSL issues at the WTO negotiations, the ability of small vulnerable states to negotiate would be even further weakened.

Built-in agenda

- An increasingly common position of developing countries is that the negotiating mandate for the new round should be based upon the so-

called 'Uruguay Round' built-in agenda and should not extend to the 'new issues'. Some larger developing countries argue that until they actually see the putative benefits of Uruguay Round liberalisation in agriculture and textiles, there should be no new disciplines negotiated.

- The main issue small vulnerable states will have to confront is that of further *agricultural sector liberalisation*. However, small states are divided between:
  - those that benefit from the EU's Common Agricultural Policy (CAP) by virtue of their assured access to key markets through the tariff quotas provided under the commodity protocols of the Lomé Convention; and
  - those that are beneficiaries of neither tariff quotas with CAP prices nor US preferential sugar quotas. For these countries the phasing out of agricultural subsidies is seen as beneficial as it will raise world prices. For example in the Pacific Fiji, which exports sugar to the EU and the USA under preferential agreements, benefits from the high internal prices but the rest of the Pacific islands, which export copra and coconut oil, suffer from low world prices because of subsidies by large WTO members.

  Small vulnerable states would be wise to recognise that the numerous pressures for further agricultural liberalisation are of such an order of magnitude that they would appear to be inevitable. The best negotiating option is to seek financial assistance. This assistance for transition away from dependence upon these products could be provided multilaterally through the IMF/World Bank or through the EU in the post-Lomé arrangements. Such a negotiating position is more realistic than expending scarce political capital on attempting to support an agricultural system that, irrespective of its present benefits to some SVS, is unlikely to survive the next decade.

- *Service sector negotiations* are also mandated for the new round. In previous rounds the OECD countries have pushed for the liberalisation of trade rules on the trade in goods, services, disciplines in intellectual property and now in investment. The only sector where the OECD countries have consistently pushed for market tightening is in the 'grey' and 'black' market movement of natural persons. Only the movement of skilled managers and experts through corporations is slated for further liberalisation. Given *that many small vulnerable states are substantial net exporters of unskilled and semi-skilled labour* by virtue of their own exogenous economic handicaps, expanded disciplines and liberalised market access in this area of movement of natural

persons is in the interests of small states. One way of achieving this is through seeking developed country service *sector quota bindings on rights of temporary sojourn of unattached service providers*. This could be achieved by a guarantee from WTO members of market access for a fixed number of semi-skilled and skilled workers, who would have fixed-term work permits, i.e. it would be a scheme for guest workers. However, the political constraints to such liberalisation are well understood.

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Annex 1. Share of world trade and financial contribution of WTO members

Table 1. Comparison of WTO Members Assessed at Minimum (0.03 per cent) in 1998 with their Real Share in Trade of all WTO Members and Equivalent Hypothetical Contribution (*LDC members are shown in italics*)

WTO member	Minimum 0.03%		Real share		Difference	
	%	CHF	%	CHF	%	CHF
Antigua and Barbuda	0.03	34,320	0.008	9,152	(0.022)	(25,168)
Barbados	0.03	34,320	0.018	20,592	(0.012)	(13,728)
Belize	0.03	34,320	0.006	8,864	(0.024)	(27,456)
Benin	0.03	34,320	0.010	11,440	(0.020)	(22,880)
Bolivia	0.03	34,320	0.025	28,600	(0.005)	(5,720)
Burkina Faso	*0.03*	*34,320*	*0.008*	*9,152*	*(0.022)*	*(25,168)*
Burundi	*0.03*	*34,320*	*0.003*	*3,432*	*(0.027)*	*(30,888)*
Central African Rep.	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*
Chad	*0.03*	*34,320*	*0.006*	*6,864*	*(0.024)*	*(27,456)*
Congo	*0.03*	*34,320*	*0.029*	*33,176*	*(0.001)*	*(1,144)*
Djibouti	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*
Dominica	0.03	34,320	0.002	2,288	(0.028)	(32,032)
Fiji	0.03	34,320	0.022	25,168	(0.008)	(9,152)
Gambia	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*
Grenada	0.03	34,320	0.003	3,432	(0.027)	(30,888)
Guinea	*0.03*	*34,320*	*0.014*	*16,016*	*(0.016)*	*(18,304)*
Guinea-Bissau	*0.03*	*34,320*	*0.001*	*1,144*	*(0.029)*	*(33,176)*
Guyana	0.03	34,320	0.012	13,728	(0.018)	(20,592)
Haiti	*0.03*	*34,320*	*0.005*	*5,720*	*(0.025)*	*(28,600)*
Honduras	0.03	34,320	0.029	33,176	(0.001)	(1,144)
Lesotho	*0.03*	*34,320*	*0.010*	*11,440*	*(0.020)*	*(22,880)*
Liechtenstein	0.03	34,320	0.009	10,296	(0.021)	(24,024)
Madagascar	*0.03*	*34,320*	*0.014*	*16,016*	*(0.016)*	*(18,304)*
Malawi	*0.03*	*34,320*	*0.011*	*12,584*	*(0.019)*	*(21,736)*
Maldives	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*
Mali	*0.03*	*34,320*	*0.011*	*12,584*	*(0.019)*	*(21,736)*
Mauritania	*0.03*	*34,320*	*0.009*	*10,296*	*(0.021)*	*(24,024)*
Mongolia	0.03	34,320	0.009	10,296	(0.021)	(24,024)
Mozambique	*0.03*	*34,320*	*0.013*	*14,872*	*(0.017)*	*(19,448)*
Myanmar, Union of	*0.03*	*34,320*	*0.009*	*10,296*	*(0.021)*	*(24,024)*
Nicaragua	0.03	34,320	0.013	14,872	(0.017)	(19,448)
Niger	*0.03*	*34,320*	*0.007*	*8,008*	*(0.023)*	*(26,312)*
Rwanda	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*

Table 1 (continued)

WTO member	Minimum 0.03%		Real share		Difference	
	%	CHF	%	CHF	%	CHF
St. Kitts and Nevis	0.03	34,320	0.002	2,288	(0.028)	(32,032)
St. Lucia	0.03	34,320	0.007	8,008	(0.023)	(26,312)
St. Vincent and the Grenadines	0.03	34,320	0.003	3,432	(0.027)	(30,888)
Senegal	0.03	34,320	0.025	28,600	(0.005)	(5,720)
Sierra Leone	*0.03*	*34,320*	*0.004*	*4,576*	*(0.026)*	*(29,744)*
SolomonIslands	*0.03*	*34,320*	*0.002*	*2,288*	*(0.028)*	*(32,032)*
Suriname	0.03	34,320	0.007	8,008	(0.023)	(26,312)
Swaziland	0.03	34,320	0.017	19,448	(0.013)	(14,872)
Tanzania	*0.03*	*34,320*	*0.028*	*32,032*	*(0.002)*	*(2,288)*
Togo	*0.03*	*34,320*	*0.009*	*10,296*	*(0.021)*	*(24,024)*
Uganda	*0.03*	*34,320*	*0.015*	*17,160*	*(0.015)*	*(17,160)*
Zambia	*0.03*	*34,320*	*0.026*	*29,744*	*(0.004)*	*(4,576)*
Total	1.35	1,544,400	0.481	550,264	(0.869)	(994,136)

Table 2. Draft Scale of Contributions for 1999
(Minimum contribution of 0.03 per cent)

Members	1998 contribution CHF	1999 contribution %	1999 contribution CHF	Interest earned[1] CHF	1999 Net contribution CHF
Angola	80,080	0.06	75,876		75,876
Antigua and Barbuda	34,320	0.03	37,938		37,938
Argentina	537,680	0.48	607,008	(1,810)	605,198
Australia	1,567,280	1.35	1,707,210	(11,640)	1,695,570
Austria	1,990,560	1.57	1,985,422	(13,613)	1,971,809
Bahrain	102,960	0.08	101,168	(750)	100,418
Bangladesh	102,960	0.09	113,814		113,814
Barbados	34,320	0.03	37,938	(182)	37,756
Belgium	3,695,120	2.92	3,692,632	(21,598)	3,671,034
Belize	34,320	0.03	37,938	(1)	37,937
Benin	34,320	0.03	37,938	(127)	37,811
Bolivia	34,320	0.03	37,938		37,938
Botswana	45,760	0.04	50,584	(212)	50,372
Brazil	1,052,480	0.83	1,049,618	(2,548)	1,047,070
Brunei Darussalam	45,760	0.04	50,584	(66)	50,518
Bulgaria	125,840	0.11	139,106	(8)	139,098
Burkina Faso	34,320	0.03	37,938		37,938
Burundi	34,320	0.03	37,938		37,938
Cameroon	45,760	0.03	37,938		37,938
Canada	4,404,400	3.91	4,944,586	(33,861)	4,910,725
Central African Rep.	34,320	0.03	37,938		37,938
Chad	34,320	0.03	37,938		37,938
Chile	331,760	0.34	429,964	(645)	429,319
Colombia	286,000	0.25	316,150	(1,002)	315,148
Congo	34,320	0.03	37,938		37,938
Costa Rica	80,080	0.06	75,876		75,876
Côte d'Ivoire	80,080	0.07	88,522	(98)	88,424
Cuba	45,760	0.05	63,230	(229)	63,001
Cyprus	80,080	0.06	75,876	(548)	75,328
Czech Republic	583,440	0.48	607,008	(3,218)	603,790
Congo, Dem. Rep. of	45,760	0.04	50,584		50,584
Denmark	1,258,400	1.00	1,264,600	(9,674)	1,254,926
Djibouti	34,320	0.03	37,938		37,938
Dominica	34,320	0.03	37,938	(132)	37,806
Dominican Republic	114,400	0.10	126,460		126,460

[1]Interest earned in 1997 under the Early Payment Encouragement Scheme (l/6384) and to be deducted from the 1999 contribution.

Table 2 (continued)

Members	1998 contribution CHF	%	1999 contribution CHF	Interest earned[1] CHF	1999 Net contribution CHF
Ecuador	102,960	0.09	113,814	(374)	113,440
Egypt	297,440	0.26	328,796	(1,372)	327,424
El Salvador	45,760	0.04	50,584	(94)	50,490
European Com.			0		
Fiji	34,320	0.03	37,938	(246)	37,692
Finland	869,440	0.74	935,804	(5,267)	930,537
France	7,321,600	6.02	7,612,892	(48,581)	7,564,311
Gabon	45,760	0.04	50,584		50,584
Gambia	34,320	0.03	37,938		37,938
Germany	11,211,200	10.16	12,848,336	(70,085)	12,778,251
Ghana	34,320	0.03	37,938		37,938
Greece	388,960	0.33	417,318	(1,259)	416,059
Grenada	34,320	0.03	37,938	(18)	37,920
Guatemala	57,200	0.05	63,230	(266)	62,964
Guinea	34,320	0.03	37,938		37,938
Guinea-Bissau	34,320	0.03	37,938		37,938
Guyana	34,320	0.03	37,938	(179)	37,759
Haiti	34,320	0.03	37,938	(99)	37,839
Honduras	34,320	0.03	37,938	(71)	37,867
Hong Kong, China	4,049,760	3.82	4,830,772	(29,705)	4,801,067
Hungary	366,080	0.29	366,734	(2,242)	364,492
Iceland	45,760	0.04	50,584	(349)	50,235
India	652,080	0.73	923,158	(1,292)	921,866
Indonesia	995,280	1.01	1,277,246	(4,184)	1,273,062
Ireland	800,800	0.76	961,096	(5,806)	955,290
Israel	674,960	0.53	670,238	(4,540)	665,698
Italy	5,193,760	4.94	6,247,124	(39,425)	6,207,699
Jamaica	68,640	0.05	63,230	(137)	63,093
Japan	9,586,720	7.58	9,585,668	(35,406)	9,550,262
Kenya	57,200	0.05	63,230	(210)	63,020
Korea, Republic of	2,654,080	2.48	3,136,208	(13,355)	3,122,853
Kuwait	274,560	0.24	303,504		303,504
Lesotho	34,320	0.03	37,938	(51)	37,887
Liechtenstein	34,320	0.03	37,938	(264)	37,674
Luxembourg	251,680	0.22	278,212	(1,522)	276,690

[1]Interest earned in 1997 under the Early Payment Encouragement Scheme (l/6384) and to be deducted from the 1999 contribution.

Table 2 (continued)

Members	1998 contribution CHF	%	1999 contribution CHF	Interest earned[1] CHF	1999 Net contribution CHF
Macau	80,080	0.06	75,876	(520)	75,356
Madagascar	34,320	0.03	37,938	(20)	37,918
Malawi	34,320	0.03	37,938	(5)	37,933
Malaysia	1,498,640	1.18	1,492,228	(4,202)	1,488,026
Maldives	34,320	0.03	37,938	(50)	37,888
Mali	34,320	0.03	37,938		37,938
Malta	57,200	0.05	63,230	(355)	62,875
Mauritania	34,320	0.03	37,938		37,938
Mauritius	45,760	0.04	50,584	(334)	50,250
Mexico	1,727,440	1.56	1,972, 776	(6,405)	1,966,371
Mongolia	34,320	0.03	37,938		37,938
Morocco	183,040	0.16	202,336	(131)	202,205
Mozambique	34,320	0.03	37,938		37,938
Myanmar, Union of	34,320	0.03	37,938	(217)	37,721
Namibia	34,320	0.03	37,938	(229)	37,709
Netherlands	4,038,320	3.61	4,565,206	(28,930)	4,536,276
New Zealand	331,760	0.30	379,380	(2,817)	376,563
Nicaragua	34,320	0.03	37,938		37,938
Niger	34,320	0.03	37,938		37,938
Nigeria	228,800	0.19	240,274	(4)	240,270
Norway	960,960	0.95	1,201,370	(4,956)	1,196,414
Pakistan	217,360	0.18	227,628	(247)	227,381
Panama	160,160	0.13	164,398		164,398
Papua New Guinea	57,200	0.04	50,584	(131)	50,453
Paraguay	57,200	0.05	63,230	(334)	62,896
Peru	137,280	0.13	164,398		164,398
Philippines	526,240	0.41	518,486	(1,764)	516,722
Poland	549,120	0.57	720,822	(3,576)	717,246
Portugal	663,520	0.64	809,344	(3,769)	805,575
Qatar	68,640	0.06	75,876	(275)	75,601
Romania	171,600	0.17	214,982	(870)	214,112
Rwanda	34,320	0.03	37,938		37,938
St. Kitts and Nevis	34,320	0.03	37,938	(206)	37,732
St. Lucia	34,320	0.03	37,938	(231)	37,707
St. Vincent	34,320	0.03	37,938	(28)	37,910

[1]Interest earned in 1997 under the Early Payment Encouragement Scheme (1/6384) and to be deducted from the 1999 contribution.

Table 2 (continued)

Members	1998 contribution CHF	%	1999 contribution CHF	Interest earned[1] CHF	1999 Net contribution CHF
Senegal	34,320	0.03	37,938		37,938
Sierra leone	34,320	0.03	37,938		37,938
Singapore	2,574,000	2.35	2,971,810	(11,733)	2,960,077
Slovak Republic	194,480	0.20	252,920	(1,676)	251,244
Slovenia	217,360	0.18	227,628		227,628
Solomon Islands	34,320	0.03	37,938		37,938
South Africa	629,200	0.54	682,884	(5,196)	677,688
Spain	2,802,800	2.45	3,098,270	(14,251)	3,084,019
Sri Lanka	102,960	0.09	113,814	(594)	113,220
Suriname	34,320	0.03	37,938	(266)	37,672
Swaziland	34,320	0.03	37,938	(228)	37,710
Sweden	1,830,400	1.45	1,833,670	(10,223)	1,823,447
Switzerland	1,979,120	1.68	2,124,528	(14,752)	2,109,776
Tanzania	34,320	0.03	37,938	(230)	37,708
Thailand	1,361,360	1.31	1,656,626	(8,568)	1,648,058
Togo	34,320	0.03	37,938		37,938
Trinidad and Tobago	45,760	0.03	37,938	(279)	37,659
Tunisia	160,160	0.14	177,044	(762)	176,282
Turkey	686,400	0.79	999,034	(3,651)	995,383
Uganda	34,320	0.03	37,938		37,938
United Arab Emirates	594,880	0.52	657,592	(1,954)	655,638
United Kingdom	6,783,920	5.95	7,524,370	(39,091)	7,485,279
USA	17,869,280	15.55	19,664,530		19,664,530
Uruguay	68,640	0.06	75,876		75,876
Venezuela	366,080	0.35	442,610	(123)	442,487
Zambia	34,320	0.03	37,938		37,938
Zimbabwe	45,760	0.04	50,584	(284)	50,300
Total	114,400,000	100.0	126,460,000	(542,828)	125,917,172

[1]Interest earned in 1997 under the Early Payment Encouragement Scheme (l/6384) and to be deducted from the 1999 contribution.

Annex 2. Issues relating to 'investment preference'

This annex deals with some of the questions relating to an investment preference facility. It also considers some of the possible objections that could be raised to this type of alternative to the existing trade preference regime.

◆ ***How would an investment preference facility work?***

The operation of an investment preference would depend upon the scale of the project proposed to the facility. The scheme would operate at three separate levels:

1. Through the IFC directly, for large investments;
2. Through private sector banks, for smaller loans;
3. Through NGOs, for a micro-project component.

The provision of concessional assistance would occur at the beginning of the project through either the provision of low-interest loans or, in the event of a high-risk project, an equity position being taken by a risk capital fund. An investor would receive access to these funds if the country is defined as a small vulnerable state or a least developed country. In the event that the country is graduated by ECOSOC from LDC status or in the event that an SVS surpasses a threshold level of world trade for a period of five years, then access to the fund would be withdrawn. However, firms that have already received loans or equity injections would remain unaffected. Appropriate exit conditions for the disposal of equity held by the investment preference facility would have to be developed so that equity could be withdrawn from the project.

◆ ***This would be a subsidy to inefficient operations***

Currently, subsidies provided under arrangements for disadvantaged regions are exempted from many of the WTO disciplines. As the world economy globalises, investment will move away from high-cost regions, which may experience high operating costs for reasons beyond the control of the state. A World Bank/IFC investment preference facility should be seen as the global equivalent of an investment fund for the world's highly disadvantaged regions.

The funds, if provided directly to the private sector, would be a subsidy, but it would be a subsidy to the cost of establishment, unlike trade preference, which subsidises inefficient operations through a continual stream of revenues. Such revenues are subsidised indirectly through a

duty remission offered by the trade preference donor.

In order to assure that such a facility is not a subsidy to structural and macroeconomic inefficiency, it could also be operated as part of a structural adjustment programme provided once a country has undertaken basic economic reforms. For those economies that operate in such a manner as to create high production costs, the facility would not achieve the objective of stimulating investment, because even with such subventions, investment would not be forthcoming.

While investment preference is not a first best outcome, it does constitute a possible transitional arrangement for highly disadvantaged countries that have been highly dependent upon trade preference arrangements.

◆ ***It would distort the local capital and money market***

Distortions to local capital and money markets could be minimised by ring-fencing the portfolio of the facility to investments and loans in new export sectors that would otherwise not be supported by domestic financial institutions. Ring-fencing the investments to the export sector would then have the same sectoral impact as trade preferences have had in the past.

The facility should not be involved in investments that are the normal domain of domestic financial institutions. The advantage of such a facility is that it would not be at the discretion of trade preference donors, which, by lowering duties, can completely alter the structure and level of incentives available to investors in least developed countries and small vulnerable states. The calculus of the investor would be based only upon landed prices for the export and would hence be based on less market-distorting factors than is currently the case with trade preferences. Trade preferences offer an administrative subvention to exporters based largely upon domestic trade policy considerations of the trade preference donor. Investment preferences, however, could, at least in principle, be tailored to the needs of least developed and small vulnerable states.

◆ ***This has been tried before and failed***

In general most of the facilities that provide low interest loans, such as the European Investment Bank facilities through the Lomé Convention, do so through governments, as they have normally required government guarantee. In the past, regional and multilateral development banks have offered investment funds that have been passed on to national development finance institutions through the government. In order to cover the foreign exchange risk, governments have marked up the loans and hence

the private sector has received very little or no direct financial benefit from the facility. In order to assure that investment preference works the benefits of low interest loans have to be passed on to the private sector borrower.

◆ ***Such a facility involves numerous types of moral hazard***

There are a number of possible moral hazards but these can be managed. Such hazards include the following:

1. If the facility is managed by commercial banks, the moral hazard is associated with the possibility of a domestic commercial bank abusing the facility in the full knowledge that it would be reimbursed by the facility if a borrower defaulted on a loan. This can be avoided only by requiring any associated commercial bank to provide a portion of its own funds for any investment.
2. A further moral hazard exists when a state-owned financial intermediary becomes involved, as has been the case in many small states. In this case loans have become highly politicised. For this reason, the facility should be limited to commercial banks, with a subsidy to the commercial bank to cover the cost of administration, thus ensuring that the full benefit is passed on to the private sector borrower/investor. Without assistance to cover the cost of loan administration it is doubtful many commercial banks would be interested in being involved. This is the only way one could ensure that the benefits of low interest, long gestation loans are actually passed on to the investor rather than being held by the financial intermediary.

◆ ***The facility subsidises capital costs and therefore skews the nature of the investment towards more capital intensive projects***

There can be no doubt that this is a serious distortionary consequence of this type of facility because of the probability that investors with capital intensive projects or more capital intensive techniques of implementing a given project will be attracted by such a subsidy to capital.

The Pacific Island States and the WTO: Towards a Post-Seattle Agenda for Small Vulnerable States[1]

Roman Grynberg

Introduction

The purpose of this paper is to update participants on recent developments in the WTO as they pertain to some of the world's smallest, least developed and most vulnerable economies in the Western and Central Pacific. At present three Forum island countries (FICs) of the 14 independent island states of the Pacific are members of the WTO.[2] These countries, Papua New Guinea, Solomon Islands and Fiji, were either GATT *de facto* members or acceded immediately prior to the completion of the Uruguay Round and are WTO founder members. Three more countries, Vanuatu, Samoa and Tonga, are currently in the process of accession with Vanuatu simultaneously the closest to accession and possibly the first country trying to accede to the WTO that will withdraw its application. Three of these six countries, Samoa, Vanuatu and Solomon Islands, are classified by ECOSOC as least developed countries (LDCs), although if more sophisticated modalities were employed for graduation and reclassification of countries, arguably most of the 14 FICs would be classified as LDCs.

The experience of FICs with the WTO has in large measure been based upon the management of the challenges that the birth of the organisation and the completion of the Uruguay Round have created. While few dispute that the WTO has created opportunities for trade, these are not opportunities that have, in any evident way, benefited the island states of the Pacific. This is in large measure not because the states of the region are inward looking, but rather because their economies have, by and large, not reached a stage of development, or are so disadvantaged by the combined economic effects of smallness, isolation and dispersion, that they are not in a position to take advantage of these opportunities.

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[1]This is a revised version of a paper presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

[2]Australia and New Zealand are members of the Forum and the WTO.

This paper will focus first upon the various policy and administrative challenges created by the WTO for FICs, and on attempts by the small vulnerable states (SVS) to develop a global alliance of small states at the WTO. The second part of the paper will focus upon appropriate modalities to turn the liberalisation process into one where SVS can also benefit from the opportunities created by global trade liberalisation. This section will of necessity refocus on the WTO work programme for SVS and the thorny issue of definition and graduation. Without an appropriate and widely accepted definition of small vulnerable economies, the attempt to gain either special and differential treatment (SDT), or access to special facilities, will face even greater challenges when it becomes an issue in the WTO or other multilateral agencies.

Challenges created by the WTO

The WTO is the single most significant manifestation of the post-Cold War globalisation process. Globalisation and the end of the Cold War have led to an obvious fear of marginalisation among developing countries. Decreases in aid levels both in real per capita terms and as a percentage of developed country GDP, together with the loss of trade preference, have undermined the economies of developing and least developed countries. This process of loss of aid and diminution in the commercial value of trade preference due to trade liberalisation is undermining the economic foundations of the small island states of the Western Pacific. The section below considers the experience with panel reports and the liberalisation process, as well as FIC experience with the trade policy review mechanism and the accession process.

Panel reports and liberalisation

In this section the reports of various panels and the evolving trade liberalisation agenda are considered in terms of their impact upon regional economies and regional trade agreements.

The Banana Panel reports and the Suva Convention

The three Banana Panel reports and the dispute between the USA and the EU last year have meant that countries which are reliant upon commodity protocols have felt increasingly vulnerable to changes in trade policy. This has been particularly the case in Fiji which has experienced a substantial decline in investment as a percentage of GDP in the last few years. While this has been in large measure caused by endogenous factors, such as land law insecurity, there can be little doubt that insecurity over the Sugar Protocol and sugar prices has served to compound the problems of Fiji in stimulating domestic investment. Similarly, concerns over

WTO compatibility of tuna preferences going into the EU market has also adversely impacted development of tuna processing facilities throughout the Pacific region.

The inconsistency of the Lomé Convention with the WTO provisions has necessitated the creation of Pacific regional integration frameworks to prepare for a possible Regional Economic Partnership Arrangement (REPA) with Europe. This inducement to regional integration among the FICs can be seen as one of the few beneficial side effects of the Banana Panel reports. However, there remains a very justified fear that the need to bring the post-Lomé trade regime into conformity with Article XXIV of the GATT through reciprocal liberalisation towards the EU beginning after 2008 may well be premature. Given the complex web of de jure and *de facto* most favoured nation (MFN) obligations with Pacific rim countries this will induce an equivalent liberalisation with USA, Australia and New Zealand. Such a process may actually serve to retard, or even destabilise, the development process of the region in much the same way as premature financial liberalisation in south-east Asia served to destabilise that region in 1997.

TRIMs, ATC and Sparteca

The South Pacific Regional Trade and Economic Co-operation Agreement (Sparteca) between Australia and New Zealand and the 14 FICs grants the latter free market access for originating exports to the Australian and New Zealand markets. Sparteca, when read together with the provisions of Australian sectoral policy towards motor vehicles and textiles, clothing and footwear (TCF) industries, has been of substantial benefit to Samoa and Fiji. The Australian Motor Vehicle Plan, which is a transitional arrangement for that sector, specifies that in order to meet the definition of 'Australian-produced' there are obligations for domestic producers to meet certain domestic processing requirements. It was the change in the definition of domestic content in the early 1990s to include FIC content that induced Yazaki (Australia) to shift its highly labour-intensive production of electronic belts from Australia to Samoa. Last year there were 3,000 people employed at the facility but employment has now fallen sharply to around 1,700. As Australia moves to further liberalise its motor vehicle industry the domestic processing requirements may not continue in order to assure full compliance with the TRIMs agreement.

Similar concerns exist in Fiji over Australian liberalisation of the TCF sector. Approximately 17,000 jobs have been created in the Fiji garment industry as New Zealand and then Australian manufacturers moved offshore to capitalise on the benefits of the liberalisation of the sector and its full inclusion under Sparteca from 1988. Australia, using an export

subsidy regime for its textile sector, subsidised the exports of textiles which were then processed in Fiji and other countries, and re-exported as garments to Australia. However, as Australia moves to bring into effect the terms of the WTO's Agreement on Textiles and Clothing the Fiji garment industry will lose the benefit of subsidies provided to exported Australian textiles. Furthermore this will also compound its difficulties in complying with the 50 per cent ex-factory cost rules of origin provisions of Sparteca.[1] Thus changes in the trade regime in Australia which will assure WTO compliance could adversely effect both Samoa and Fiji.

Fisheries Subsidies

The highly sensitive question of the environmental impact of WTO incompatible subsidies to the fisheries sector, while not yet a WTO dispute, may have very adverse effects upon revenue from fisheries access agreements in the island states of the Western Pacific. In the case of some of the smallest FICs, fisheries access fees make up one third of government revenue. The environmental movement, together with the USA and New Zealand, has argued that subsidies to the fisheries sector are responsible for much environmentally unsustainable fishing, especially in the North Atlantic and off the coast of West Africa. The EU and to some degree Japan, both of which offer subsidies to their own fleets, are seen as the principle violators of the WTO Agreement on Subsidies and Countervailing Measures. Strictly speaking there is no need for new WTO disciplines in this sector. There is every reason to believe that existing disciplines would be adequate to cover fisheries subsidies but because the sector is sensitive, sector specific subsidy reduction agreements may be necessary to deal with the problems of the sector, much as in the case of agriculture during the Uruguay Round.

One of the most important sources of revenue for the smallest island states are payments made by the USA under the terms of the US multilateral fisheries access arrangement with the members of the Forum Fisheries Agency. This access agreement is without doubt the most generous of any signed by the countries of the Western Pacific resulting in government revenues of approximately 10–11 per cent of the value of the catch. However, approximately 80 per cent of the disbursements by the USA is made from funds (i.e. subsidies) provided by USAID. It is precisely this type of fisheries access agreements between the EU and West African states that has been the subject of attack by the environmental NGOs such as the World Wildlife Fund and Greenpeace. If new or exist-

[1]At present Fiji garments are exported under a temporary derogation from the 50 per cent rule for a range of products. This derogation is reviewed on an annual basis.

ing disciplines are applied globally to regions like the Western Pacific where there are generally no real issues of unsustainable harvests of tuna, then the victims of this dispute may be some of the world's poorest and most vulnerable economies.

The Accession Process

The experience of FICs with panels and liberalisation may be seen as indirect and via its effects on more powerful trading partners. But the impact of the accession process is very clear, direct and transparent. At present three FICs – Vanuatu and Samoa, which are also LLDCs, and Tonga are in the process of accession. Of the nine LLDCs awaiting accession to the WTO Vanuatu is the most advanced. The negative experience of Vanuatu with WTO accession has been such that some of the other FICs which had been considering making an application are now reconsidering.

Vanuatu has now been trying to accede to the WTO for five years. It has expended approximately US$300,000–400,000 in its efforts at accession thus far. It has now reached the point where it has completed almost all protocol negotiations. Vanuatu has also completed bilateral negotiations with all its major trading partners, including the EU, Japan, Australia, New Zealand and Canada. The only outstanding problem that Vanuatu currently has in terms of its bilateral negotiations is with the USA, a country with which it does not trade (total bilateral trade is less than US$1 million)

Vanuatu is ranked, depending upon which index one uses, amongst the world's most vulnerable economies. Vanuatu has no income tax and the government depends largely upon import duties and a recently introduced value added tax for revenue. Vanuatu has agreed to bind its tariff at an arithmetic average of approximately 45 per cent. It has also agreed to make specific commitments in 16 service sectors, which is four times the average of LLDC members of the WTO. Vanuatu has agreed to zero-for-zero commitments in over 160 tariff lines and is in full conformity with zero-for-zero initiatives in information technology.

This does not appear to be sufficient for the USA which has demanded that Vanuatu lower its bound tariff to around 15–25 per cent and open the telecommunications sector. In Vanuatu this is not legally possible as France Telecom has an ironclad gateway monopoly until 2012. The USA has demanded that Vanuatu make commitments to open the telecommunications sector in 2012. Vanuatu has replied that opening the telecom sector would result in France Telecom quite rationally deciding not to invest in the improvement of telecommunications infrastructure. In 12

years Vanuatu would find itself far behind the rest of the world in telecommunications, which is vital to a small vulnerable country highly dependent upon tourism and the service sector.

More importantly the US demands for a reduction of the bound rate of import duty to 25 per cent would result in a complete loss of flexibility in the taxation system. In the event of a natural disaster, a relatively common cause of decreased revenue and increased expenditure, the government would not be in a position to raise import duties. Vanuatu has only requested transitional arrangements in the application of the Agreement on Customs Valuation and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs) for two years which is permitted to LDC WTO members for much longer. The USA has not agreed to even these moderate requests for transition. Unless there is a moderation of US demands Vanuatu has indicated that it will this year withdraw its application for WTO membership.

The USA has no trading interest in Vanuatu. Its demands are systemic rather than country specific. These demands being placed on a LLDC are being done because of the precedent that it would create with other applicants to the WTO. Thus Vanuatu is simply 'collateral damage'. WTO officials are fond of saying that the multilateral trading system is a rules-based system but the accession process has no rules and is the very antithesis of what the members publicly state to be the intention of the organisation. Accession, because the applicant is not a WTO member and has no rights, is power based and more importantly the applicant cannot inflict any marginal cost on the WTO members when they demand progressively more trade concessions. It is this latter factor that makes the accession process inherently flawed and not just because it is between LLDCs and small vulnerable states like Vanuatu and large WTO members such as the USA, EU and Japan.

One of the most famous clichés repeated at WTO ministerial conferences is the desire of members, 'to integrate the least developed countries into the multilateral trading system'. Yet the experience of Vanuatu is the exact opposite. Once ministers have finished their diplomatic speeches the job of trade officials is 'business as usual', i.e. extracting the maximum concessions possible irrespective of the development needs or status of the applicant.

Not until the WTO lives by its promises and creates a genuinely rules-based system will least developed and highly vulnerable countries be able to take their proper place at the WTO. At present accession is power based where the applicant, even a powerful one such as China, has no real power to inflict any marginal cost on a demandeur. *The negotiation of*

WTO accession is fundamentally flawed and lawless, and as a result in desperate need of reform, for it undermines the credibility of the rules- based multilateral trading system.

Trade Policy Review

One of the most positive experiences that small vulnerable states experience at the WTO is the process of trade policy review (TPR). This WTO review of the trading system is intended, by and large, to be a transparency exercise. The TPR mechanism was intended to be somewhat similar to IMF Article VIII consultations. However, during the Uruguay Round, members were unwilling to grant the WTO that level of authority.

Thus far all three FIC WTO members have undergone at least one TPR. All have commented positively upon TPR as a transparency exercise. The information that is brought together by the WTO allows local officials to better understand the reality of the domestic trading environment. Ironically, hard pressed local trade officials often do not themselves know the details of the domestic trading environment. The Trade Policy Review document is thus an important contribution to the understanding of the business environment in small vulnerable states.

However, there is another side to the TPR which is somewhat more problematic as it has a normative message that there exists an ideal 'best practice' model of trade policy against which WTO members are judged. This best practice model is implicit and never stated, because for political reasons it would be quite unacceptable to WTO members. However, there is no doubt that it exists and it is, not surprisingly, a free market, laissez faire model. This is despite the fact that the WTO Secretariat repeats, as a mantra, that it is there to support gradual and negotiated liberalisation and not free trade at any cost. When WTO members have confronted the WTO Secretariat seeking an explicit statement of what this best practice model is, as was the case late last year when Papua New Guinea went through TPR, there is only a denial that it exists. However, the text of the TPR document, both in the case of Papua New Guinea and Solomon Islands, indicates a policy response that is based on a laissez faire, free trade model. That some countries, for example Korea and Taiwan, have dramatically departed from the laissez-faire approach and experienced rapid and prolonged economic growth, while others, such as Hong Kong, have not departed from such a model, while also experiencing rapid growth, does not appear to be cause for any measure of circumspection.

One issue in the TPR, perhaps the most sensitive of all trade issues in the region, indicates in a most poignant manner the direction of WTO think-

ing on trade and development policy. Both Papua New Guinea and Solomon Islands have, to a limited extent, pursued a policy of downstream processing of raw materials such as timber, marine products and agricultural products. Both countries have also pursued a policy of agricultural diversification. In the case of Papua New Guinea some of the attempts have been very successful, such as palm oil, which was a government-led attempt at diversification. In the Solomon Islands diversification of exports towards tuna canning was also a government-led initiative. Other *dirigiste* attempts at diversification, such as sugar in Papua New Guinea and rice on Guadalcanal were somewhat less than successful.

The policy objective of moving away from being the exporter of a narrow range of unprocessed raw materials is a deeply held, and in large measure bipartisan policy objective in both countries. The downstream processing that does occur in Melanesia has rarely gone beyond the export of some sawn timber and canned tuna. The WTO argued that 'downstream processing is an undesirable economic objective' because it would mean a departure from production of unprocessed products where Melanesian countries are seen as having a comparative advantage. The view of the WTO is that resource-rich islands should remain the optimal resource rent seekers and export unprocessed forest and marine products, leaving production and processing to those countries with a comparative advantage. It is difficult to imagine a policy prescription that is more odious to Pacific island policy-makers. Rather than advising on the need to put limits on the costs imposed on society by downstream processing, the WTO position is doctrinaire and is widely seen as perpetuating the region's comparative advantage inherited from the colonial period.

The WTO trade policy review reports, both in the case of Solomon Islands and Papua New Guinea, took particular exception to the policy practice of exempting processed timber from export taxes that are normally imposed on logs. This, it is argued, created market inefficiencies and distorted optimal behaviour by loggers. Yet there is almost no evidence that loggers process significant quantities of timber in either country. This is despite very large incentives to do so. The reason that no processing occurs, despite substantial incentives, is that massive rents are earned from various forms of trade malpractice in the industry which remain widespread despite efforts by both governments to stamp them out.

The WTO advocated the elimination of export taxes and their replacement with an auctioning system. However to offer such policy advice based on the assumption of the existence of a competitive market for logs in Melanesia is at variance with the available evidence. One firm in

Papua New Guinea controls over 50 per cent of exports and hence an auctioning system would be impractical. There is a need in the case of TPR for a more balanced and less doctrinaire approach to trade and development policy.

Ironically the World Bank, which presented its report on Papua New Guinea in Port Moresby in the same week as the WTO's TPR, argued for the reintroduction of export taxes on logs which had been temporarily suspended. There is clearly a need for a greater measure of policy coherence between the Bretton Woods institutions and for a greater measure of understanding of its members by the WTO Secretariat.

Seattle and the SIDS Alliance

Prior to the Seattle Ministerial Conference the small states of the Caribbean and Pacific and Indian Oceans attempted to form a strategic alliance for the purpose of the WTO Ministerial Conference. Despite concerted efforts, as well as clear ministerial mandates in both the Pacific and the Caribbean, this strategic alliance has not yet materialised. This is not to suggest that there have not been actions taken by small states as a group at Seattle to assure their position.

At Seattle Fiji, working together with the Forum Secretariat and the Caribbean Community (Caricom), produced a petition demanding an improvement in language regarding the small states from the Committee of the Whole. The result of the petition, signed by heads of delegation of 15 Small Island Developing States (SIDS) from the Pacific and Indian Oceans and the Caribbean, was that there was vastly improved language in the draft ministerial communiqué which, had it been approved, would have seen the beginning of a work programme on small states at the WTO. This is the stage prior to the establishment of a working group and the first step towards some form of recognition for SVS. The draft ministerial text was not agreed to in Seattle and the meeting failed. However, once the USA presidential elections are completed there is a reasonable expectation that a second attempt will probably be made to relaunch the Millennium Round and small states will need to be prepared for this meeting.

The effort to re-establish the global alliance of island states is now all the more vital. Not only is there a need for political alliance but there is a need for a work programme that:

- defines the scope of, and empirically demonstrates that, the trade and investment difficulties that confront SVS are of an order not significantly different from LLDCs;

- considers appropriate options for the definition of small states and a system of graduation of those small states no longer requiring any form of special and differential treatment at the WTO or access to special facilities;
- defines appropriate measures, whether in the WTO or other multilateral fora, to assist small states in becoming fully integrated into the global economy.

Perhaps most importantly, the creation of a global alliance of small states will help deal with the most difficult of WTO issues since the Seattle meeting, the democratisation of decision-making. For many small states the Seattle meeting was the first they attended where there were concrete preparations for a new round of multilateral trade negotiations. The now infamous 'Green Room' process, where only a few large WTO members are invited to unscheduled meetings of the WTO to make major decisions on policy, was viewed by many WTO members as an affirmation of their worst expectations of how the organisation functions. However, the demands for transparency and democratic decision-making must clearly be balanced against the obvious demands of organisational efficiency. Making decisions with 135 members present will render the organisation dysfunctional. The creation of a formal global alliance of small states may be the best way to assure that a representative is at those small group meetings that are necessary to make the WTO an efficient functioning organisation, while simultaneously allowing for transparent and accountable representation.

The WTO work programme for small vulnerable states

Trade and Investment Constraints faced by the SVS

Few small island states in the Pacific now believe that they will benefit from liberalisation of trade in any substantial way without going through a very long and difficult transition period. Moreover, many of the FICs feel they are not sufficiently strong or stable to weather the severe political and economic consequences of these transitions. The position of multilateral agencies remains that there is no reason for further intervention in SVS, and that economic adjustment is both a necessary and sufficient condition to assure economic growth. What is not accepted is that some island states may be so small, isolated and vulnerable that it is difficult to imagine what combination of internal adjustment policies would induce substantial domestic or foreign investment. Many SVS suffer from very high operating costs stemming not from policy-induced measures but from the inherent nature of small, isolated and physically dispersed economies.

It is not until the global community is willing to recognise that a substantial portion of these cost disadvantages are inherent, and not just related to endogenous policy measures, that appropriate modalities will be developed to assist SVS take advantage of opportunities being created by trade liberalisation. Herein lies the policy tension for SVS in dealing with globalisation and the WTO. While the WTO may be creating a globalised economy, it is not the WTO that is in any position to deal with the problems created by globalisation for SVS. Globalisation leads investors to look for locations for investment that minimise costs. Small isolated economies rarely fit this description. *Thus globalisation may, for sound economic reasons, lead to a decrease in investment in small vulnerable states.*

Regrettably, for political reasons, multilateral agencies may be willing, at least nominally if not in terms of resource flows, to treat SVS as a particular and special category of disadvantaged states, but at a technical level there is little or no support for the recognition of the SVS because there is a widespread belief that smallness imposes no significant disadvantage on a country. The paper presented by William Easterly last year in St. Lucia, entitled 'Small Countries, Small Problems?', remains very much the mainstream view of the impact of smallness on development. While at a political level there has been a reaction to this paper, there has, to the best of the author's knowledge, been no systematic attempt to refute its conclusions.

Unless SVS are willing to address this issue in their work programme, any attempts to seek special and differential treatment or any other form of recognition beyond *de minimis* provisions will fail in the much more hostile political environment of the WTO.

Appropriate options for the definition of small states

There exist numerous possible definitions of SVS. In the past definitions have been based upon:

- Demographics (Comsec)
- Size of GDP
- Share of world trade (WTO)

While all three can be used to gauge smallness, they do not address the question of economic and environmental vulnerability which at present is the one quality of small state economies that has received relatively wide acceptance by the international community. Apart from vulnerability there are at present no other economic qualities that are accepted internationally as hampering the development of SVS. As a result, if the SVS are to make rapid progress towards recognition at the WTO and

multilateral fora, then the vulnerability index will constitute an important component in that process. Forum leaders have endorsed the vulnerability index and have called for its acceptance by the global community in assessing the development status of SVS.

However the question of definition, and the even more difficult question of an appropriate modality for the graduation of countries that have, through economic development, become less vulnerable, must remain political rather than technical. This is because any definition that is chosen will have border cases that will exclude countries that are widely perceived to be worthy cases for special and differential treatment. Many of the political problems associated with graduation can be dealt with by the use of appropriate lag periods for those countries at what are politically defined as being critical thresholds in the vulnerability index for SVS. However, all the technocrat can do is offer several reasoned options for those thresholds and, in the final analysis, it is a political choice as to which point or range on the vulnerability index the international community sets. In light of the experience of the WTO and the refusal of members to define 'developing' countries, leaving the question to self-election, one should not assume that any discussion of graduation in an organisation based on consensus will be easy.

The small vulnerable states have time to find appropriate options for defining themselves on the vulnerability index, along with other widely accepted measures of disadvantage. There is a political consensus emerging that that many SVS face problems that are not dissimilar to those countries that are now defined as LDCs. However, this political consensus will be undermined unless the SVS demonstrate that the technocratic consensus around works similar to that of William Easterly has failed to grasp the depth of trade and investment problems confronted by small states.

Modalities for assisting small states

The first part of the work programme of the SVS must address the problem of empirically demonstrating that SVS have a case for some special assistance that is beyond their development status. Then the focus must be upon which institutions are best able to assure that SVS become fully integrated into the multilateral trading system. In this regard the range of solutions to this problem may well lie with the World Bank/International Finance Corporation rather than with the WTO. Indeed, the development of catastrophe insurance programmes constitutes one constructive way that multilateral agencies can assist in dealing with vulnerability. However vulnerability to natural disaster is not the only trade problem confronting SVS.

As argued above, many of the trade and investment problems confronted by the SVS stem from measures towards globalisation taken at the WTO. However, it is not evident that their resolution necessarily falls within the competence of the WTO. The calls for more special and differential treatment, while certainly useful and necessary, solve nothing in terms of attracting more investment to small vulnerable states, which remains the only way in which they will benefit from globalisation. Just as nations and regions have special funds to provide appropriate market-friendly incentives for investors to locate in disadvantaged areas within the European Union, Canada and the USA, there is a need for the development of similar facilities by the global community.

The experience after the Uruguay Round with the Ministerial Declaration of impact on net-food-importing countries is a case at hand. Here is a situation where the global community recognised that the outcome of the agriculture negotiations would have adverse effects on developing countries. Moreover, the negotiations that commence this year on agriculture will only serve to compound these difficulties. Yet the international community never operationalised its concern because the issue was relegated to a ministerial declaration rather than becoming part of the agreements of the Uruguay Round or being taken to more appropriate fora such as the World Food Programme or the World Bank.

The need for SVS, working together with LDCs, to develop an appropriate modality that will assure full integration in the trading system is clear. However the most appropriate institution for this remains the IFC and not the WTO. If the focus of the SVS and LDCs remains on obtaining further special and differential treatment this, while valuable, will do little to lift the standard of living of citizens in SVS and will expend scarce political capital on a process that yields low economic returns.

Conclusion

The experience of FICs with the WTO has been one of marginalisation, resulting from a political process over which they have little say. It is a process that is increasingly seen as undermining the foundations of the regional economy which are based on trade preferences. Institutionally, to ensure that the voice of small vulnerable states is heard, a global alliance is essential and global institutions such as the Commonwealth and UNCTAD are vital in facilitating this alliance. The hiatus between the Seattle Ministerial Conference and the next affords the SVS an opportunity to get together a lasting grouping of over 30 WTO members. In light of recent experience, it is imperative that this grouping begins its

work programme at the earliest possible date to demonstrate to the international community that there exists a strong and empirically valid case for special and differential treatment. Regrettably there is as yet no such consensus and no agreed view as to precisely what measures are needed to assure the full and complete integration of SVS in the global trading system.

Revenue Implications of Trade Liberalisation[1]

Liam Ebrill, Janet Stotsky and Reint Gropp

General considerations

Consider first the general implications of trade liberalisation. Research at the IMF came to the following conclusions:

- Current levels of protection would suggest that a significant number of countries could liberalise further without adverse consequences for trade tax revenues. While obviously depending on individual country circumstances, this reflects cases where the existing tariff levels have been set so high that the implications of trade liberalisation are such as to imply that revenue increases are possible at lower-tariff levels. In addition, for those countries that rely heavily on non-tariff barriers such as quotas, there may be scope to tailor the pattern of trade liberalisation to avoid adverse revenue consequences.
- Over the longer term, the association between trade liberalisation and more rapid economic growth will further bolster revenues for a given level of tariffs.
- Nonetheless, revenue concerns may well influence the pace of trade liberalisation. This implies that implementing comprehensive reform of the domestic tax system from the outset of liberalisation should be viewed as a priority. This is even more the case since such reforms have long-gestation periods.
- In any event, genuine trade liberalisation must eventually result in reduced trade tax revenues and, hence, will raise difficult fiscal issues if appropriate steps have not been taken to strengthen the domestic tax system.
- It is of course the case that trade liberalisation is greatly facilitated by sound supporting macroeconomic policies and, in particular, appropriate exchange rate policies.

[1]This paper was written for the IMF and presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

Tax reform: best practices

Theoretical and practical considerations have yielded a set of best practices in tax and tariff systems in developing countries. The best tax systems are those that cause a minimum of distortion in the allocation of resources, satisfy equity objectives and are relatively easy to administer. The following are typically the key elements:

- A broad-based consumption tax, notably a Value Added Tax (VAT) (see Box 1), should be introduced or strengthened, preferably with a single rate, minimal exemptions and a threshold to exclude smaller enterprises from taxation. Experience suggests that excises should be restricted to a limited set of products, principally petroleum products, alcohol and tobacco. VAT and excise duties should be applied equally to imports and domestic products.
- Taxes on international trade should play a minimal role. Import tariffs should have a low average rate and a limited dispersion of rates to reduce arbitrary and excessive rates of protection. Export duties should generally be avoided.
- The personal income tax should be characterised by only a few brackets and a moderate top marginal rate, by limited personal exemptions and deductions, by a standard exemption that excludes persons with low incomes and by extensive final withholding. The corporate income tax should be levied at one moderate rate. Depreciation allowances should be uniform across sectors. There should be little use of tax incentives.
- These regimes may be usefully complemented in some countries by the introduction of a simplified tax regime for small businesses and the informal sector.
- Reform of tax and customs administrations should include modernisation of systems and procedures. Simplification of the tax and tariff systems is a prerequisite for administrative reforms. Typical reforms stress the reorganisation of tax and customs administrations along functional lines, the adoption of effective procedures for a national system of unique taxpayer identification numbers, strengthening of audits and improvement of taxpayer services. Computerisation is generally a central component of reform, along with upgrading the skills of tax and customs officers and providing them with administrative autonomy and pay incentives.

Box 1. A Primer on the Value Added Tax

The key features of the VAT are that it is a **broad-based** tax levied at **multiple** stages of production, with – crucially – taxes on inputs **credited** against taxes on output. That is, while sellers are required to charge the tax on all their sales, they can also claim a credit for taxes that they have been charged on their inputs. The advantage is that revenue is secured by being collected throughout the process of production (unlike a retail sales tax) but without distorting production decisions (as a turnover tax does).

Suppose, for example, that firm A sells its output (produced using no inputs) for a price of $100 (excluding tax) to firm B, which in turn sells its output for $400 (again excluding tax) to final consumers. Assume now that there is a VAT at a 10 per cent rate. Firm A will then charge firm B $110, remitting $10 to the government in tax. Firm B will charge final consumers $440, remitting tax of $30: output tax of $40 less a credit for the $10 of tax charged on its inputs. The government thus collects a total of $40 in revenue. In its economic effects, the tax is thus equivalent to a 10 per cent tax on final sales (there is no tax incentive, in particular, for B to change its production methods or for the two firms to merge), but the method of its collection secures the revenue more effectively.

Zero rating refers to a situation in which the rate of tax applied to sales is zero, though credit is still given for taxes paid on inputs. In this case, the firm will be due a full refund of taxes paid on inputs. In a VAT designed to tax domestic consumption only, exports are zero rated, meaning that exports leave the country free of any domestic VAT. This is called the **destination principle** and is the international norm; total tax paid on a good is determined by the rate levied in the jurisdiction of its final sale with revenue accruing to that jurisdiction. The alternative to destination-based taxation is **origin**-based taxation in which the tax is paid at the rate of, and to, the country or countries in which the item is produced rather than consumed.

Exemption is quite different to zero rating in that, while tax is also not charged on outputs, tax paid on inputs cannot be reclaimed. Thus, no refunds are payable. In this case, because tax on intermediate transactions remains unrecovered, production decisions may be affected by the VAT.

Small countries have unique features

The conflict between trade liberalisation and revenue concerns can appear to be greatest for small countries that are heavily reliant on international trade; this will particularly be the case if the initial stages of trade liberalisation have already been completed. These economies typically rely heavily on international trade for revenue; apart from revenue concerns, such economies also typically stand to gain the most from free trade. Some observations:

- There are many equivalencies between taxes with apparently dramatically different notional bases. The stress here is on economic equivalencies. Different legal standards may apply to different taxes that are economically equivalent in certain circumstances. These different standards could arise from constitutional law or international commitments.
- In the current context, an across-the-board import tariff levied only on final goods imports can approximate the impact of a domestic sales tax in economies where the bulk of final goods is imported. Thus, it is important to note that any tax, be it a value added tax or a tariff, will subject imported goods to taxation in some form.
- Trade liberalisation means that, whatever the tax regime selected, that regime should ensure that there is no bias against traded goods.

Tax policy and administration considerations for the smallest economies

This section considers some of the tax policy and administration issues that arise when considering the options facing the smallest countries as they liberalise trade. It is important, however, to ensure that any tax reform does not impede progress with trade liberalisation and is consistent with members' obligations under WTO agreements. As an organising theme for the section, the factors that might influence the decision to implement a VAT in these countries is considered, since the VAT is often considered the tax of choice when strengthening and broadening the base for revenues. Against that background:

- As can be seen from Table 1, many small countries have implemented the VAT.[1] However, are there countries so small that a VAT would be inappropriate? Should we make a distinction between small economies and the smallest economies?

[1]The year of introduction is specified for each country.

Table 1. Small Countries with a Value Added Tax

	Population	C-efficiency[1]
Albania, 1996	3.5	23.7
Armenia, 1992	3.8	15.8
Barbados, 1997	0.3	23.1
Belize, 1996[2]	0.2	56.2
Congo, 1997	2.5	11.7
Costa Rica, 1975	3.7	87.4
Croatia, 1998	4.8	90.4
Cyprus, 1992	0.6	100.1
Estonia, 1992	1.5	93.6
Fiji, 1992	0.8	84.1
Gabon, 1995	1.4	74.9
Iceland, 1990	0.3	64.8
Ireland, 1972	3.6	66.2
Jamaica, 1991	2.5	83.5
Kyrgyz, 1992	4.8	n.a.
Latvia, 1992	2.6	73.8
Lithuania, 1994	3.8	50.7
Luxembourg, 1970	0.4	82.9
Malta, 1995 and 1999[3]	0.4	67.0
Mauritania, 1995	2.6	46.2
Mauritius, 1998	1.1	n.a.
Moldova, 1992	4.5	71.2
Mongolia, 1993	2.4	94.5
New Zealand, 1986	3.6	103.2
Nicaragua, 1975	4.8	34.6
Norway, 1970	4.4	78.8
Panama, 1977	2.7	67.3
Papua New Guinea, 1999	4.4	n.a.
Samoa, 1994	0.2	n.a.
Singapore, 1994	3.0	107.9
Slovenia, 1999	2.0	n.a.
Togo, 1995	4.1	31.2
Trinidad and Tobago, 1990	1.4	46.8
Turkmenistan, 1992	4.1	n.a.
Uruguay, 1968	3.2	50.9
Vanuatu, 1998	0.2	n.a.

[1]Ratio of VAT revenues to private consumption divided by the standard rate.
[2]VAT abolished in 1999.
[3]C-efficiency is for 1995.

- Empirical analysis indicates that the greater the significance of international trade for an economy, the higher VAT revenues will be, if all else is equal. Since smaller economies tend to rely more on international trade, that would appear to indicate that value added taxes actually perform *better* in small countries than in large. (An intuitive rationale for this result is that it is easier to collect VAT on imports than on domestically produced goods.)
- Whether a VAT is especially appropriate for small economies will also depend on the difference in collection costs between a VAT and the alternative revenue source. The fixed-collection costs associated with a VAT administration may be relatively burdensome for the smallest economies with either small and/or few firms.
- Focusing on economic efficiency, a VAT will be less advantageous for countries that import most of their consumption and for which the share of intermediates in imports is low, since the economic difference between an import tariff and a consumption tax is then evidently slight. While the smallest economies are likely to import the bulk of their consumption, there is no presumption that the importance of intermediate goods in an economy is related directly to size.
- As a practical matter, one way to proceed in the smallest economies could be to implement a retail sales tax.

New Opportunities from Globalisation

Exploiting Information Technologies for Electronic Commerce and Better Public Sector Management[1]

Robert Schware[2] and Paul Kimberley

Summary

According to one school of thought, the technology gap between small and large nations will get wider and can never be reduced. This perspective argues that past expenditures on technology have created a permanent lead for some countries, an advantage that can only increase as economic differences become more pronounced.

There is another school of thought that argues that the advances created by technologies in the past have so reduced the costs of current technologies that anyone, large or small, can benefit. Small companies – even individuals – can be as efficient and responsive as larger companies by using the Internet and personal computers, even though the giant corporations may have spent billions on information technology. The same is true of small states, cities and small communities, no matter how remote. The technologies of efficiency – information technology (IT) and electronic commerce (EC) – are now available to all. The cost of technology is no longer the main constraint preventing its adoption. Hence we are seeing small enterprises, cities and some small states competing effectively with their much larger and richer erstwhile competitors. In a globalised, technology-based trading system, competitors can now also become collaborators, suppliers and customers. The rules are changing. How can small states take advantage of this situation?

Even though the economic barriers to adoption of IT and EC are falling, there are still some significant hurdles to overcome, at least in perception. Take the costs of telecommunications, for example. EC is dependent on telecommunications since it allows computers to communicate across

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[1]This paper was prepared for the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

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global or local networks. But the traditional costs of telecommunications cause concern among strategists – especially those representing monopoly or highly-regulated operators. The fact is that EC does not rely solely on land-line-based telecommunications. And even where it does, the return-on-investment calculation has changed forever, making it so much easier to justify new capacity. In many economies, Internet and data network usage surpassed voice usage of telecommunications networks during 1997–99, leaving the latter to increasingly lag behind as EC becomes ever more widely adopted. EC uses standard voice-grade, dial-up communications at the same time as they are used for traditional voice. But EC is much less demanding on the technology, and makes much more productive and revenue-earning use of it. Newer technologies such as Very Small Aperture Terminals (VSAT), cable TV, wireless and radio are all capable of carrying EC traffic. Even electric power utilities are now offering Internet access.

Moreover, new co-operative forms of procurement and management are making the justification of adopting EC methods even easier. For example, St. Lucia, Grenada, St. Vincent and the Grenadines, and St. Kitts and Nevis, backed by the Eastern Caribbean Telecommunications Authority, a regional regulatory body, have embarked on a radical programme of liberalisation. This co-operative initiative is enabling greater purchasing power, cheaper calls and liberalisation – without placing government revenues at risk.

The availability of local skills and the adequacy of resources are crucial factors. A range of options, including conventional aid, expatriate assistance, joint ventures with vendors on a risk-reward arrangement, can overcome any existing short-term deficiencies. There is no longer a critical shortage of skills – it is now a matter of applying available skills to states and entities which have the greatest needs.

Another key issue highlighted in this report concerns planning. There is no panacea for success in any enterprise, although it is remarkable how the best prepared always seem to be the luckiest. In Charles Darwin's frequently quoted words: 'It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change'. Adaptation is key to survival and to responding beneficially to opportunities. And the key to adaptation is preparedness. Success does not happen by accident in most cases. It requires research, planning, training, education, decision-making and well-managed implementation. Much of this report concerns this planning process since it is ultimately more important than cheap technology, aid or any amount of goodwill. This planning process needs to be designed to overcome real and perceived barriers, both those pre-

sented by language or local cultural and business practices, and those imposed by geography or natural hazards.

Information technology and electronic commerce offer small states unprecedented opportunities for reforming and re-engineering government services, for becoming part of global supply and demand chains, for creating new business opportunities, and for increasing the wealth, well-being and quality of life of their people. It will take considerable effort and willingness to change to take advantage of these opportunities. This applies to the governments of small states, beneficiaries of change and of aid, to the authorities of donor nations and to international agencies. We must all adapt, as Darwin told us.

Introduction

The Joint World Bank/Commonwealth Secretariat Task Force on Small States has been asked to assess alternatives and adaptations of policies to address the unique problems of small states, including their vulnerability to marginalisation, natural disasters, external economic shocks and other major issues of special interest and concern within a rapidly globalising economy.

Within this context, a paper was commissioned on new opportunities associated with the information technology revolution and from emerging electronic commerce practises. The brief is to explore the potential that IT and EC have to enable small states to participate in trade globalisation. This paper reviews the technology options available to small states and the business opportunities these options create. By analysing a range of a typical small state's strengths and weaknesses, it becomes possible to propose a prioritised plan of action, along with potential benefits, challenges, some idea of costs and inputs, institutional requirements, process improvements and a broad approach towards implementation. A discussion of the practical means by which these opportunities can be assisted by larger states will follow, sequenced according to practicality and the probability of success.

During the new decade, the size of the IT industry is expected to reach $2 trillion. The trends are that hardware and software will comprise a declining proportion of the market but that services will grow at their expense. EC is being hyped as the fastest growing sector of IT and new business, but some care needs to be taken in extrapolating opportunities based on EC projections. Of the three major sectors of EC – Consumer, Business and Government – Business-to-Business is undoubtedly the most reliable and permanent in the short term. Consumer EC is still in the proving

stages while government EC could prove, in the long term, to be the most important and the largest sector. While it is misleading to quote potential market size, around 70 per cent of all international trade is already transacted electronically, using EDI (electronic data interchange, the progenitor of today's EC) and trade-facilitation techniques. In time, more than 20 million businesses will use EC for supply- and demand-chain purposes. Business opportunities and efficiencies are the imperatives in this global systems revolution. Even a small share of these markets will yield high leverage over initial investments for small states.

It should be noted that these technologies can be applied to improve government processes and capacity, to comply with pre-conditions for globalised trading, to improve necessary infrastructure and to generally improve competitiveness. They can also serve to create new opportunities for employment and business development. The paper will discuss relevant examples.

The paper is organised as follows. The section on the economic context provides a brief overview of the technology challenges faced by small states, the reasons for these challenges and some specific problems. The section on information technology and electronic commerce covers a general introduction to the technologies, what they require to be effective and some potential key benefits for small states. In the section on technology, government reform and efficiency we look at what is needed to exploit opportunities in the public sector. The section on best practice in IT and EC gives some relevant examples, infrastructure issues, the main stages of implementation and discusses what is needed to ensure success. We then ask: 'How do small states compare? What do they need? What is missing? Can the optimum and minimum requirements for small states be identified?' Following this discussion, we examine what is possible. This section identifies specific opportunities, how to go about redressing infrastructure imbalances, and some strategies and tactics. In the next section, 'Phasing of implementation', we point to pilot programmes and resourcing, plans for partnerships and suggested work plans. This is followed by a list of considerations to explore during implementation, in a section entitled 'Work plan – summary'. The paper concludes with suggestions and priorities, and offers specific action items for discussion at the conference.

The economic context

The main problems faced by small states include trade marginalisation, consequent social problems and frequent natural disasters. Many small

states are characterised by geographic remoteness, internal dispersion, with increasing proportions of the population moving to urban centres or overseas, frequent damage from extreme weather phenomena, and a heavy dependence on aid and on taxes and excises on trade.

The relative economic and geographic isolation of some small states is accelerating their exclusion from the global supply and demand chains, resulting in poor employment prospects for their populations. In many small states, there is growing frustration among the younger elements of the population. In the Pacific region, for example, 40 per cent of the population is under 15 years old and 20 per cent is between 15 and 24 years old. There is a widespread shortage of teachers, leading to a growing mismatch between skills and future livelihood opportunities. This has accurately been described as a 'poverty of opportunity', even though on the surface there is often very little observable poverty, as the term is conventionally defined.

Further contributing factors include modest to inadequate infrastructure in many cases, particularly for IT and EC initiatives, compounded by the lack of suitable educational facilities, lack of skilled resources, and a 'technology drain' with the brightest and most enterprising young people moving to better-paying markets. This leads to difficulties in compliance with the needs of global supply/demand chains, high transaction costs and poor performance in many aspects of international trade. Government services and efficiency also suffer as a result.

From the perspective of trade and income-generating activities, many small states depend primarily on primary and tertiary sectors of the economy, on the public sector and on tourism. For many small states the most important of these sources of revenue and employment include:

- Fishing and agriculture, including sugar, horticulture and fresh produce;
- Some mining and primary industry products;
- Some manufactured products, including textiles and apparel;
- Tourism;
- The public sector;
- A small maritime and trade-processing sector.

This exclusion or, at best, marginalisation of small states to the fringes of world trade is exacerbated by several trends and factors:

- The global supply chain is meeting a growing proportion of world trade. Over 40 per cent of world trade takes place between multinationals.

- Advanced economies are increasingly dependent on IT and EC for supply/demand chain efficiencies, for economic development and job creation, for compliance with the global supply chains business processes, for new business development, and for marketing of domestic industries such as tourism, horticultural and agricultural/fishing industries, primary industries (oil and mining), textiles, footwear and apparel manufacturing, communications, banking and finance, and information-based industries.
- The most sophisticated IT and EC resources and skills are dominated by the advanced economies.
- The economic barriers to entry are formidable.

However, these trends and factors – and perceptions of them – are counterbalanced by:

- Growing demand from advanced countries for new products, particularly fresh produce, agricultural products and primary industry products, and the consequent trend toward inclusiveness in the global supply;
- Growing demand from advanced economies for inexpensive labour closer to their markets. This includes, most particularly, IT skills at every level. However, it needs to be emphasised that the 'virtual'[1] nature of IT and EC means that many of the technology-dependent operations are location-independent;
- Falling technology costs. There is a trend toward providing the technology free-of-charge, in return for a share of the resulting revenues (transaction pricing, Value-Added Service Providers (VASP));
- Opportunities to leap-frog previous technology generations by installing best practice, low-cost, higher-capacity and higher-performance systems, without any of the development costs previously borne by pioneering economies;
- Expatriates as an asset. Previous losses of the best and brightest young people to other countries mean that they can be deployed as expatriates to work on their country's behalf by technology providers. They are also a ready-made market for electronic commerce-facilitated trade;

[1]In this sense, 'virtual' implies that operations seemingly performed locally are, in fact, performed at another location. Using the Internet, a local phone call can provide access to a website that appears to be a local site but is, in fact, held on a computer on the other side of the world. Similarly, a local toll free number can connect a caller to an operator several time zones away. Credit card operations and airline reservation systems are examples of 'virtual' telephone support or call centres.

- The Internet, which makes EC affordable for even the smallest enterprise. Company internal Internets (Intranets) and Internet networks exclusively for trading-partner communities (Extranets) enable inexpensive EC for every level of organisation.

It is clear that we are moving away from the generation of technology that only the wealthy economies could afford. In addition, globalisation of skills and resources, and the needs of the globalised economies, mean that, with the right help and strategies, any state or enterprise can participate in global trade. Large enterprises now need to meet the information and support needs of their suppliers, as well as their internal and external customers without regard to time and place. This requires building global IT and EC infrastructures and services associated with the new demands of international business.

Information technology and electronic commerce

IT is essentially the merging of four separate groups of technologies: computing, telecommunications, broadcasting and multimedia. The point at which they overlap is normally called IT by the practitioner and much of the private sector. International agencies, depending on their roots, often use other terms, such as informatics, ICT (Information and Computing Technology), or IT and T (Information Technology and Telecommunications). There is no significant difference between these terms; IT is the most commonly used but the others are equally valid.

IT implicitly refers to the technologies themselves and to the professionals who deploy IT, either at manufacturer and vendor sites, or at user organisations. At the user site, IT systems are applied to the individual enterprise, which may be anything from a one-person business to the largest multinational organisation. Their systems are designed for their specific, internal use. On the other hand, EC[1] systems are designed for inter-enterprise computing. EC enables any computer to 'talk' to any other computer. More typically, EC refers to the business practices that now take place with the help of telecommunication networks, most notably the Internet, but also including Value Added Networks (VANs), Virtual Private Networks (VPNs), Intranets and Extranets.

IT is the generic set of technologies that are used to create efficiencies in individual organisations. They include computers, communications and their attendant skills. EC requires the IT infrastructure as a starting point. It also uses sets of business procedures that enable the IT systems in the

[1]Equivalent terms include E-Commerce, I-Commerce and Digital Commerce.

supply chain to inter-operate with each other, that allow governments to participate in these types of processes, and that also allow individuals to participate. EC uses a range of inter-enterprise initiatives (business, industry and government) that enable EC users to exchange information in standard formats so that the IT systems of any participant can recognise the electronic information being exchanged. These standards initiatives include messages (standard invoices, customs declarations, etc.), codes (product codes, bar codes, location codes – for example, airports and airlines, size and measurement codes and business practices), automatic identity technology such as scanning, wireless ID/transponders and GPS systems. But most of all, EC initiatives make possible JIT (Just-in-Time inventory control), QR (Quick Response retail replenishment), ECR (Efficient Consumer Response for the supermarket industries) and a range of systems in which governments participate, such as trade facilitation for automating customs and port processes, electronic tax lodgement, and electronic government and governance.

In the context of small states, EC and IT can be deployed for these tasks, among others:

- Efficiencies of industry and government, leading to productivity improvements and economic growth. In particular, there are opportunities for improved macroeconomic management and introduction of practical public expenditure/budget management and monitoring systems.
- Participation in globalised industries, leading to process improvement, business development, industry diversification, and employment opportunities.
- Opportunities to perform high-value operations at lower costs than in developed countries, thereby transferring employment opportunities, since EC, in particular, makes geographical location irrelevant.
- Trade process reform, including ports and customs, technical controls (prohibitions and restrictions, government trade licensing and approvals, and other non-tariff barriers), trade professionals and traders. This can lead to increased trade efficiencies and the ability to handle smaller consignments more efficiently and more often. It can also lead to efficiencies and competitive advantages in transshipment, transit and free port or duty-free zone operations.
- Increased tax revenues due to increased economic activity and improved government efficiencies, including state owned enterprises (SOEs) and government business enterprises (GBEs).

The technologies can offer many other potential benefits, but even this first look illustrates that IT and EC are no longer restricted to the big players. Properly planned and managed, they can be very effective in any environment. They can induce and introduce efficiencies that may have been considered to be impractical before, they can introduce new revenue opportunities for both the public and the private sector, and they can generate new employment opportunities. But to make the most of the technologies, it is necessary to make adjustments to traditional ways of doing business, in both government and private sector organisations.

Technology, government reform and efficiency

Most important, it is incumbent on government to initiate reform so as to facilitate the new world of technology-induced trade. And reform does not just include changing laws and regulations; it also includes reform of organisations, processes and attitudes. Clearly, any programme of reform must take into account local cultural issues and practices, which can make reform of governance and government services a huge and multifaceted task, involving elements such as legal reform, privatisation and contracting, training and education, and changes in salary structures. However, one central element of the process is improvement in information flow and processing. Here, IT can have a central role.

There are numerous computerisation programmes underway in governance and government services at the national and local levels of government in developed countries. These are designed to smooth the interface between citizens and government, and to improve the quality of services.

A mass of evidence from case studies around the world suggests that introducing IT as part of a reform effort can have a dramatic impact on the quality of governance and of services from local and national level government – *if it is implemented in a supportive institutional environment, with the backing of key stakeholders, and in co-ordination with other projects.*

The challenge for the public sector in small states, no less than in others, is to find ways to adopt and use modern IT solutions. They can be a potent productivity tool and a platform for improved service quality, for 'formalising' public management processes and thereby reducing rent-seeking opportunities, and for strengthening government information flows, both inter-agency and with the private sector and civil society. Typically, earlier efforts to integrate IT into the operation of government, though an important first step, were not designed to form a co-ordinated, comprehensive reform and extension of information-based governance and government services. If small states are to reap the full benefits of the

IT revolution, this reform and extension will have to be a central element.

Firstly, *where IT applications are being implemented in an unco-ordinated manner without concern for interoperability, standards or economies of scale and scope, co-ordination is needed to overcome this.* In turn, this will necessitate reform of IT management within the government. The first step towards reform of IT use in government is to ensure high-level co-ordination and the support and co-operation of high-level stakeholders. A unified programme and oversight between ministries is needed to ensure (at the very least) compatibility between management information systems.

Secondly, *the full range of possible uses of IT in government should be examined, and areas for priority (co-ordinated) implementation established.* Possible uses break down into:

- *Clerical systems*, including office automation and email communication, high volume transactions networks (including revenue collection), immigration, utility payment and licensing systems;
- *Management systems* such as statistical analysis, information management, monitoring networks and planning models;
- *Public systems* such as participatory interfaces.

Thirdly, *selected IT priority programmes should be introduced, taking advantage of scale and scope economies wherever possible.* Possible priority programmes include:

- Creating a secure and, where necessary, bilingual, Intranet within the government for email and document handling facilities;
- Payment of utility bills;
- Reform of pension schemes;
- Computerising and reforming the customs and port handling systems;
- Pilot public information kiosks in rural communities.

Introducing IT into projects can be highly complex. Project success is thus profoundly dependent on the application of highly skilled technical and professional services – both in-house and contracted. Shortages of such skills are common. Public sector agencies, in particular, find it difficult to budget adequate resources for such 'intangible' services and/or to pay competitive wages and fees for such services. Compromises in this area typically result in problems arising in all aspects of an IT project. Also, the IT industry is highly unsettled. The rates of change in information technologies and in related methodologies are unprecedented. Moreover, the rate at which entirely new technologies emerge is exceptionally swift.

As a result, system managers must not only plan and execute programmes of rapid and continuous system renewal, but they must also programme for continuous extensions to system functionality. The pace of change affected by such programmes is virtually unparalleled in other technical contexts. Similarly, the horizon of 'foreseeable' future under which such programmes must be planned and executed is exceptionally short. Of necessity, learning, trial-and-error and mid-course corrections figure prominently in systems planning, implementation, and operations.

An agency which is considering the implementation of an information system must therefore first take very seriously the planning and acquisition of the system. It must invest substantial resources in these processes. Once acquired and implemented, a system will continue to require substantial resources for the effective management of the system's operations, as well as to sustain the system over the long term. These resource requirements include those for software maintenance, continuous technological updating and functional extensions.

It should be noted that reform of the use of IT in government itself is only the first step, and the impact of these reforms will be greatly dampened if the broader environment is not 'IT-friendly'. Here, government has a central role in:

- Human resources development in IT skills base;
- Ensuring the lower costs of information access and processing through removing, or at least lowering, the barriers to competitive entry;
- Improving customer choice, reducing costs, and improving quality of services through greater private sector involvement in telecommunication services;
- Supporting the development of an information culture, for example, through support for local-language content development;
- Supporting business and civil society interaction with IT-based government services through access, training, and support; this is especially important if access to services is to be equitable;
- Opening the IT sector to well-regulated competition, and reducing tariff and non-tariff barriers to foreign supply;
- Supporting business use of EC through regulatory and judicial reform which addresses also privacy and security issues;
- To help overcome resistance to change and the engineer employee-led transformation of work processes and attitudes through the adoption of IT based systems;

- Venture capital and/or co-ordination support for community information centres, Internet backbones and startup firms.

Developing momentum is crucial. There is a range opportunities for use of IT that remain only partially exploited in most small states:

- Better provision of government services using IT, including social safety nets and tax systems;
- Universal access to IT;
- Education, including use of IT as a pedagogical tool and lifelong training in information technology through the provision of computer facilities for schools, for students and community members;
- Legislation and regulation for electronic commerce, including reviewing existing laws and regulations in order to remove inhibitors to IT and EC, and to facilitate the widest participation in the information age;
- Innovative support for entrepreneurial activities in information industries or industries supported by information infrastructure;
- Support for local content sites, including for trade and tourism.

Follow-on work could move toward further development to take advantage of a range of opportunities discussed above, but the first step is clearly consultation within government and with civil society as to the direction(s) and speed(s) of change. Options for project financing in this area include:

Supporting joint strategies. Increasingly, efforts are underway to establish multidisciplinary task forces on the development of the informatics sector, recognising the centrality of a co-ordinated and widely accepted plan of action to respond to the changes engulfing the sector. A multidisciplinary team can be effective, with full time staff support. Action plans that are developed also include marketing and training strategies. Project funds might support capacity-building for co-ordination on broader Informatics discussions, helping to create a 'community of knowledge' among government departments through the provision of Internet access, and a central support staff.

Encouraging broad-based participation and use. If wide-ranging reform is to be both successful and equitable, stakeholders must be involved in the design and implementation of projects from the beginning. This suggests the centrality of participatory development in the process of moving toward an information economy. In particular, stakeholders should be able to form their own 'communities of knowledge' and 'communities of practice'. Here, project resources might go toward supporting an early

involvement of stakeholders in the design of future projects covering areas such as community access and the wider use of Informatics in schools, as well as using the tools of information infrastructure to improve business opportunities and broader development objectives.

Best practice in IT and EC

Countries with the best records in the use of IT and EC usually started by articulating a national vision for the technologies, by promoting technologies, and by allocating responsibilities to senior public and private sector bodies and to prominent individuals. They made provision of the right infrastructure a national priority, including educational and training needs. They set industry and public service priorities and introduced a range of incentives for innovation. The same is generally true of smaller or less developed countries that have taken the same approach, such as Singapore, Mauritius, Taiwan, New Zealand and Ireland. Of course, almost all these countries are wealthy, already self-sufficient or have powerful sponsors. The challenge for small states is to provide the impetus for similar outcomes from a unique, possibly new, mix of inputs.

Assuming the existence of a national vision and strategy, together with the right allocation of responsibilities, and that the availability of financial resources is not the most serious constraint, then the following are the main issues that need to be quantified and qualified in order to create an integrated project plan to offer the optimum potential for successful deployment of IT and EC.

Infrastructure requirements and minimum cost options

It is first necessary to assess the existing levels of power, telecommunications and computer infrastructures and compare them to optimum needs, so as to build a plan to bridge the gaps. The infrastructure does not necessarily need to serve the whole of society. Initially it can be targeted at the areas of best potential, such as particular government departments, customs and ports, key private sector enterprises, and selected educational and training establishments. The potential for VSAT telecommunications and wireless technologies should not be discounted. Offers of inexpensive reconditioned equipment and conditional special software offers from major vendors should be seriously considered. There is considerable room for manoeuvring in the establishment of an infrastructure for specific purposes.

Reform, legal and regulatory aspects for the implementation of a national IT/EC agenda

There is considerable experience to draw upon in this area. For example, the UN has for many years sponsored the UNCITRAL initiative (UN

Convention on International Trade Law). One prime example of their work is the model Electronic Commerce law, which is being adapted and adopted by nations around the world. The intention is to create a climate in which all trading partners, including government agencies, may with confidence use the technologies of IT and EC to conduct their business. The leading economic powers and the major multinational companies see this legal regime as a prerequisite for new entrants to global supply chains.

Technology and skills requirements

In addition to the raw materials of IT, such as telecommunications and computers, an IT/EC economy needs network service providers, such as ISPs (Internet Service Providers). These may be the local telecommunications company, but ideally they come from a deregulated and competitive marketplace. There are viable technical options to 'piggy back' on overseas ISPs and telecommunications firms' offerings.

A range of skilled technical people is required, and they are at least as important as the technologies. Strategies are necessary to develop local resources, to use contractors (including expatriates) and to make the best use of existing programmes and services.

Educational and training Requirements

A key component of developing local talent is to create the right courses with the best available teaching talent. Initially this may make use of overseas universities, remote and distance learning schemes, incentives to attract expatriates back to share their knowledge and some contracting. Once again, training should be highly targeted at actual project needs. It will not help to train people for work that does not exist. This educational programme, to be targeted at the creation of a cadre of IT professionals, begins with introduction of Internet facilities into tertiary and secondary facilities phased in over a period of, say, five years. It should also be inclusive of the adult population, in co-ordination with government and commerce/industry, to ensure the right levels of IT literacy for existing and continuing employment.

Field experience has shown that small, as well as large, countries are not satisfied with the prospects of entry-level IT jobs, such as data entry. They want a balanced set of skills to be developed, so as to enable all IT applications to be serviced locally, where possible. A key component in meeting this requirement is the teaching and certification of IT skills in context, for such key industries as agriculture, horticulture, textiles and apparel, international trade, tourism and public sector applications.

Commercial aspects of skills and technology sourcing

It may not be necessary to buy much of the computer equipment and

associated technologies. The IT and EC industries are already moving towards transaction pricing, whereby the vendor shares risk for a share of rewards. There is also a range of BOT, BOO, and BOOT – Build/Own/Operate/Transfer – contracts available. All are aimed at reducing up-front costs and risks until the project becomes self-financing.

Electronic government: improved efficiencies in the public sector

Annex 2 gives some ideas on current plans and practices in the area of electronic government and governance. In many smaller countries, the government is the largest economic power and the largest employer. It is potentially the largest procurer of IT goods and services. If the government itself does not embrace both the technologies and the new business processes made possible by the technologies, then a national programme is unlikely to succeed. So the role of government needs to be planned at the outset, as does the impact of government participation on public sector employment and the costs of transferring jobs from the public to the private sector, retraining and associated incentives.

Electronic banking and finance

Annex 1 illustrates the potential for banking and finance in the brave new world of EC. The participation of firms in these sectors is as important as that of the government. Some thought needs to be given as to how best to obtain the co-operation of this sector in the overall mission and in the implementation of national plans. Properly implemented, electronic banking and financial services can generate significant revenues and employment. It is also true to say that without electronic banking in the future, banks themselves – and their clients – will suffer.

Creating a national IT/EC strategy

A national vision and strategy for IT and EC is a prerequisite of success. Private sector initiatives might prosper on their own, but without the help and endorsement of government they are likely to have only a marginal impact on the economy. One of the key decisions to be taken is whether to adopt the technology for national competitive advantage, or to achieve parity with competitors and with trading partners' requirements. It is tempting to believe that there is still room for competitive advantage. It may be there, but it has become clear that due to the accelerating developments in technology a competitive advantage today might be a disadvantage tomorrow. Short-term advantages are just that, short-term. Efficiencies are forever, and complying with trading partner requirements is providing clients and suppliers with a greater level of service.

The level of debate must be thorough and it needs to be informed by expert input. Both long-term and short-term strategies must be considered, within well-defined objectives, which may vary for each country.

Implementing and managing a national plan

Once there is agreement on a national vision and a strategy to achieve that vision, it is necessary to select and manage priorities. A national plan is normally a long-term and complex series of projects. It needs to be managed full-time, by competent people. Many countries have opted to create a national organisation to manage this type of project. Virtually all of the successful national initiatives within smaller or developing countries have used the services of a national facilitating body. The organisation, through its Chief Executive Officer, might report to a national committee or directly to a minister. Its charter is to implement a plan in accordance with agreed time scales and costs.

Integrating implementation with transition planning

There is a great temptation to try a 'big bang' approach, to replace all of the old paper-based bureaucratic processes with modern computer and EC-based systems at one bold stroke. That approach cannot possibly work, although it might appear technically feasible. There are people, customs, traditions, and familiarity with traditional ways – as well as costs – involved. There is an ever-present risk of failure. It is preferable to implement a professionally administered series of transition plans, where each system is tested out in isolation and then gradually phased in based on full training and acceptance testing. It might be time-consuming, and it might appear to cost more, but it has more chance of success. More initiatives have failed because of the lack of transition planning than for any other reason.

Cultural conventions, business practices and language

Another series of factors to consider is local cultural and religious practice, and local ways of doing business and of managing enterprises. Once again, it can be comforting to think that technology can immediately dispense with local conditions. It cannot. Great care should be taken for plans to be adapted to local cultural factors and how they interact with transitioning to new practices.

Clearly there are many other considerations in formulating best practice for any country. Conditions vary, opinions differ and experience changes things. But there is a wealth of experience in implementing these systems, whether at firm, department, industry or national level. It is that accumulating body of experience that makes the next implementation much easier than the first. There is not much room for pioneering left.

How do small states compare?

Small states generally lag behind in both IT and EC. Investment, culture, skills, priorities and many other factors combine to create this condition.

Telecommunications monopoly and reliance on government sources of revenue from telecommunications and customs duties combine as an inhibitor to institutional change. A basic challenge associated with reaping the benefits of IT and EC is how to reform, deregulate and even privatise institutions without risking government revenue loss. The challenge of this project is to devise ways of transiting small states' economies into technology-led growth during the period of deregulation.

Suggestions in later sections of this paper include the concept of 'virtual' free-trade zones, in which organisations can participate in EC in a deregulated environment specially equipped and resourced for the purpose. This concept extends the idea of free-trade zones to electronic commerce 'virtual' free-trade areas which, because they are virtual, need not necessarily be in a fixed geographic location. Other suggestions include ideas on how quick start-ups can be achieved, with help from close and traditional partners, and from the international community. So while the current status might not, in general, seem to be too good, for others it represents a green field of opportunities.

What is possible?

IT applications hold promise for job creation in some contexts. IT has traditionally required a great deal of data entry for such tools as telephone directories, databases and so on. There are many examples of large catalogues, directories, and databases being key-entered into computers in other countries where data entry labour is either more plentiful or cheaper. That work exists in abundance today, with the caveat that quality, reliability and speed are of the essence. Many developing countries take on this type of work. While it is price-sensitive, it generates considerable employment.

India is an example of a country where programming for other countries is generating considerable income and jobs for well-qualified computer graduates, at salaries that are considerably less than those prevalent in more developed economies. There are various reports of shortages of programmers, some setting the figure at an international shortfall of over two million in 2000. Web page design, multilingual data entry, web page creation and translation, multilingual programme and systems support, remote technical support and remote consulting are all examples of 'exported' IT work available today. There are many other examples.

The following are two examples of current World Bank-supported work which could be replicated in other small states:

- The first project idea is to provide Internet equipment and training to members in a number of offices of the Windward Island Farmers' Association (in Grenada, St. Lucia, St. Vincent and the Grenadines, and Dominica). Skills and access will be used to support co-operative sales and facilitate direct trading with European and US consumers. This would help local farmers during a time of declining opportunities in European markets due to the renegotiation of the Lomé agreements and weak local market conditions. The target group is among the poorest sections of Windwards' society. The project provides them with training, access to information and communication technologies, and the opportunity for greater returns to labour through higher prices and reliable markets. The estimated project budget is $950,000, providing a computer and communications equipment, training and first year communications costs for 12 sites. Recurrent project costs would be met through a fee on trade transactions facilitated by the Association. The timeline would be approximately six months from grant to implementation for equipment purchase, installation and initial training.
- The second project idea is for combined-service rural telecentres to provide Internet access for students and local communities. The centres would be based in rural areas in Grenada, St. Lucia, St. Vincent and the Grenadines, and Dominica to provide local schools with day-time access to computers and Internet for IT training and computer-based learning. The centres would also provide after-school paid access to local people for adult training and World Wide Web use in a cybercafe format. The target group for this project is the rural population, in particular students. The young rural population faces declining agricultural opportunities, at the same time as there are growing opportunities in traded information services industries, expected to create 1,500 new jobs in countries within the Organisation of Eastern Caribbean States by 2002. At present, however, rural students lack access to training in order to exploit these opportunities. The centres would also provide increased access to information on government services, adult education resources, etc.

EC initiatives include reform of customs and port systems to enable fast electronic clearances of import and export goods. This means that smaller shipments can also be cleared quicker making 'just-in-time' and 'quick response' global supply chain initiatives and participation with multinationals possible. These trade facilitation projects reduce transaction costs considerably and encourage transparency of transactions. Both improvements are welcomed by the international trade community and lead to increase in trade and improvements in the transhipment and

transit trades. Mauritius, Fiji, Bahrain, Lebanon and numerous Middle Eastern countries and developing countries are implementing these systems.

EC-based efficiency improvements in port operations can help make ports more profitable, encourage greater use and yield better offers for facilities managed or privatised ports. Greater trade throughput yields higher government revenues through customs and port operations. There are outstanding examples of port applications of EC and IT in both Singapore and Bahrain. Through deregulation and privatisation ports around the world are adopting trade facilitation and port information automation systems.

Other EC initiatives include tourism systems that enable easier booking of travel, resorts, entertainment and visas. EC developments include 'virtual' tourism, whereby potential visitors can see the type of room and tourist sites they might visit. Once a potential visitor has made an 'Internet visit' it is possible to market to them directly using the Internet and to monitor success rates. It is also possible to keep in touch with them before and after their visit, making the experience more personal and increasing the potential for return visits. It also increases the possibility that they will buy souvenirs either before or after their visit, once again over the Internet. The major CRS and regional tourism organisations are well into the planning phase for such initiatives. Their success could be enhanced by small states partnership arrangements.

There is a whole range of EC-facilitated efficiencies that can be offered by government – for service level improvement, for cost efficiencies and for revenue generation. Licences, visas and passports can be applied for, and in some cases obtained, over the Internet. Traders are able to obtain all technical controls in this fashion, saving considerable expense over time. Together with trade facilitation improvements, this will lead to lower consumer prices. Electronic tax lodgment, statistical inputs and social services can all be improved by EC. Government procurement systems using IT and EC are particularly beneficial. They offer more efficient tendering, contracting and buying, with a wider range of suppliers at lower prices, and they make possible lower levels of inventory holding. Savings of up to 20 per cent of government expenditure can be obtained by using these methods, complemented by modern contracting and pricing practices.

Textiles, apparel, footwear and other manufacturing operations can both sell and buy over EC networks. EDI (Electronic Data Interchange) is the means by which global businesses exchange all business information. EC makes this global trading borderless and timeless. Geography becomes almost meaningless with this type of trade. EC presents small states with

the opportunity to participate in global trade supply chains. Mauritius has adopted EC systems for integrating its textile and apparel manufacturing operations with global supply chains. It is also creating a sub-contract industry in Madagascar as a result of its success in this industry. Islands and territories such as Fiji and smaller African states and Indian and Pacific island countries could adopt similar measures.

Primary industries, agriculture, horticulture, the sugar industry, and fresh produce and local beverages can all be promoted to the global market using EC techniques. The Mauritius Sugar Authority and its horticulture equivalents have begun to implement electronic catalogues for Internet-based marketing of their produce. Several supermarket groups have proprietary systems and are interested in adding fresh produce and food and beverages from developing countries and new suppliers.

All of these examples are assumed to be 'professional' in scope and scale, that is, the trading partners are businesses or government. In some cases it might be feasible to sell souvenirs, gifts or books directly to consumers (Business-to-Consumer EC). But this requires a good fulfillment infrastructure, i.e. courier or express carrier services. Certain small businesses and local crafts can do well in this area but it cannot yet be planned on, with any great confidence, as a general creator of revenue or employment for small states.

Phasing of implementation

The following series of steps is proposed to help maximise the potential for successful results for a minimum investment. These steps are relevant to any geographic region. This proposal is intended to stimulate discussion on practical measures to successfully introduce EC for revenue and employment generation, as well as for skills development.

- Technology can help in some cases – but it is only part of the solution, though possibly the crucial part. Strong regional co-operation, external assistance, and patience are also needed. How do we communicate that message and obtain agreement?
- The need for change and the role of technology have to be broadly accepted at the outset. How do we best build awareness, bearing in mind resources and geography?
- Decision-makers need to be made aware of what is possible. How do we create opportunities to expand on awareness-building among decision-makers and major influencers?

- Assessments of a region's inventory of skills, resources, and technological progress are needed. They need to be analysed and results can then be compared to best practice[1] in order to draw up an action matrix. At this stage it may be useful to create a regional, or small states, marketing authority to sell a region's emerging expertise in selected sectors or areas.
- Potential projects must be identified, and priorities discussed and selected.
- Prior to implementation, we need to identify the best potential groupings of resources for specific opportunities. We need to quantify the need for external resources to complement internal resources, to increase the probability of success. Project planning, project funding, project management: who, how, how much, when?
- Implement pilots; carefully monitor, manage, measure – and adapt.
- Wide adoption of specific actions for clearly defined purposes.
- Build on success.

Work plan: summary

Once priority projects are selected for implementation, the following work plan can be envisaged:

- Identify local and expatriate talent in education, and in the public and private sectors. Address education, upgrade existing skills. Draw upon regional universities, distance learning programmes, implants from overseas universities in local facilities, short courses and scholarships – a good example here is Singapore 'scholars'. Certify local practitioners and training/education establishments.
- Establish connections and proxies with world bodies driving IT and EC, such as national IT and EC associations; regional bodies such as the Asia Pacific Economic Conference (APEC) EC group and the UN Economic and Social Commission for Asia Pacific (ESCAP); and international bodies such as UNCEFACT (the UN Centre for Facilitation of Procedures and Practices for Administration, Commerce and Transport), EAN (European Article Numbering), ICC (International Chamber of Commerce) and the UN Convention of International Trade Law (UNCITRAL).

[1]The World Bank has a country assessment methodology under evaluation.

- Conduct awareness and country assessment exercises to establish a datum for skills and resources.
- Identify specific telecommunications and computer needs.
- Assess the value of regional hubbing for telecommunications, for business, IT and internet skills pool. This essentially means regional co-operation and facilities sharing arrangements between telecommunications companies and their main partners in order to fast-track EC facilities to selected small states.
- Evaluate the potential for departmental and village Internet booths, kiosks, value-added stores and traders.
- Look at virtual free-trade zones and virtual government systems. Aim to enable clusters of companies and selected government operations/departments to receive economically priced EC access and IT systems. The national telecommunications company and regional/hubbing partners can establish ISPs for (an initially) exclusive groups of users, covered by special legislative and pricing arrangements to enable them to establish beach heads in EC, for business, government and educational purposes. They do not need to be clustered together in a particular physical location – EC techniques mean that they can be dispersed yet still considered to be a 'free-trade zone'.
- Consider regulating Internet imports to a well-managed professional source, operated through proxy servers (i.e., exclusive to certain users). This means that EC-ordered goods are imported, initially, in an orderly manner so that small states' procurement strategies can be drawn up regarding the role of EC in an overall trade policy environment, without prejudice to future options.
- Consider use of nodes to economic partner's telecommunication systems or a regional hub for Internet, trade efficiency, port and customs systems, i.e. subcontract technology to a (generous) third party and access that technology through a local node at local call rates. This technology can include international Internet bandwidth, computing power, Internet merchant servers, consulting and development, and technical support.
- Look at VSAT and wireless technologies for Internet dispersion and local telecommunications bandwidth expansion.
- Examine a 'buddy system', or special relationship between technology partners and small states – even down to individual cities. Donors can examine the means to make this tax or cost-efficient for partners. Essentially this means establishing close relationships with expert

partners, enabling them to provide necessary skills, facilities and rapid market entry on a preferential basis, based on traditional relationships and trust.

- Focus on existing strengths to promote earnings and tax base – tourism, agriculture, horticulture, fresh produce, textiles and apparel, local foods and beverages, fishing, public sector and, most important, trade, efficiencies.
- Examine the potential for technology-based job creation through development of education programmes, technology skills, data entry, multilingual and cost-efficient call centres,[1] multilingual and culturally sensitive systems design and programming, 24-hour client support for existing international EC operators.
- Examine the potential for efficient Internet intermediary operations, such as buy from one place, sell to another, within and outside the region.
- Develop the financial services sector based on Internet principles. Examples include Internet banking, financial services, insurance, 24-hour product marketing and call centre support.
- Develop and expand on the concept of virtual tourism – for example, virtual sailing and virtual fishing, with international tourism operators, airlines and resort operators.

Suggestions and priorities

Small states can substantially benefit from IT and EC. The following is a list of specific actions that should be considered as priorities for many small states:

- Compile a work plan, including an EC Preparedness Assessment.
- Discuss the feasibility of a technological 'buddy system', even using twinned cities and donor incentives to assist this process. Nominate some key 'hot house' or incubator projects.
- Consider means by which to exempt EC from monopolised telecommunications rules in virtual trade zones, including IT initiatives.
- Target expatriates for trade opportunities and repatriated skills. Contact or establish an international supermarket/retail contact group to encourage assistance to small states. Enlist WTO/WCO (World

[1]This is especially relevant around the dateline.

Customs Organisation) and UN peak industry bodies to help, if and where possible.

- Encourage vendor 'tiger teams' to implement key pilots as part of international aid/international assistance. Discuss potential with agencies such as the World Bank, Infodev, UNDP, bilateral donors, International Telecommunications Union, EU and regional development banks.

Annex 1. Electronic Commerce Practices

Figure 1 illustrates the administrative functions of an organisation serving internal processes and the supply chain, generally called the *back office*.

The order processing and sales and marketing functions dealing with the demand chain, i.e. the organisation's clients or customers, and their clients and customers, throughout the complete chain (see Fig. 2). This is often called the *front office*.

Hard goods, or those goods that have a tangible physical presence requiring elements of traditional delivery, such as packaging, transport and receiving processes. *Soft goods*, or those items that can be delivered by the network and computers themselves, such as software, publications, a range of Government and marketing services, some financial services, consultancy, music, etc.

Engineers used to differentiate between computer hardware and software by saying that computers were the 'bits you could lean on'. The same differentiators apply to hard goods and soft goods.

Supply chain (see Fig. 2): One can be taken as the inverse of the other. As the retail end of the supply chain might see it, the chain is the interlinked network of all suppliers that comprise the raw materials, assembly, packaging, warehousing and shelf-stocking of the goods sold by the retailer. Typically the supply chain only considers those organisations that are actually on the critical path of supply. To be complete it should also embrace services to the supply chain, such as distribution, banking and insurance, government services, trade facilitation processes, etc.

The *demand chain* is essentially the same as the supply chain but is seen through the eyes of a supplier to that retailer, either directly or through other links in the chain. The concept of the demand chain and the application of EC to its management is a recent development but will be widely adopted and heavily influenced in the future by EC techniques. Currently neither supply chain nor demand chain management has made many inroads in the chain management process, apart from the links immediately on either side of the major trading hubs, such as retailers, auto manufacturers and other manufacturers, supermarkets and some government processes. Note that the payment process and aggregated profit throughout their supply/demand chain are known as *the value chain*.

MRO, or maintenance, repair and operations: These are supplies that cannot be automatically replenished, such as spare parts for capital equipment, public utility bills, cleaning and maintenance supplies, etc. EC can help but it still takes manual intervention to initiate replenishment of these non-periodic supplies.

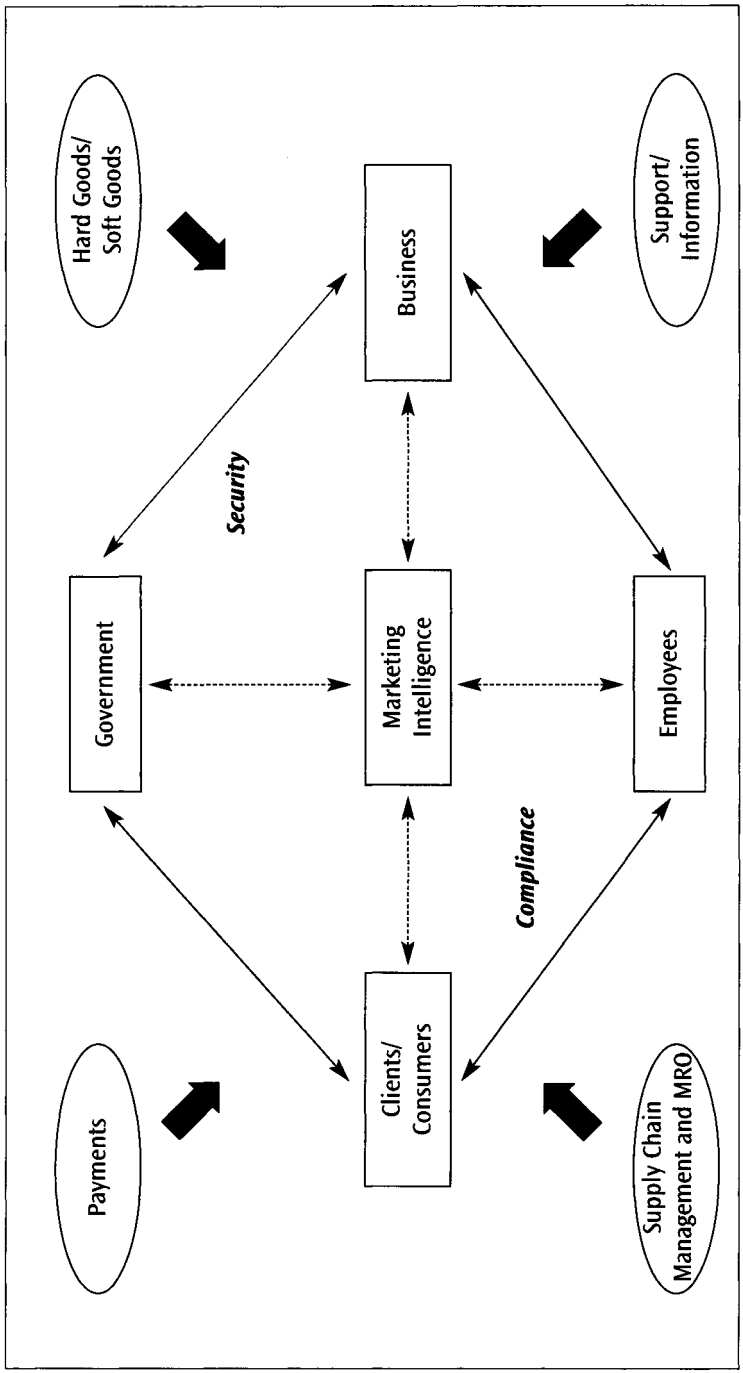


Figure 1. Elements of EC

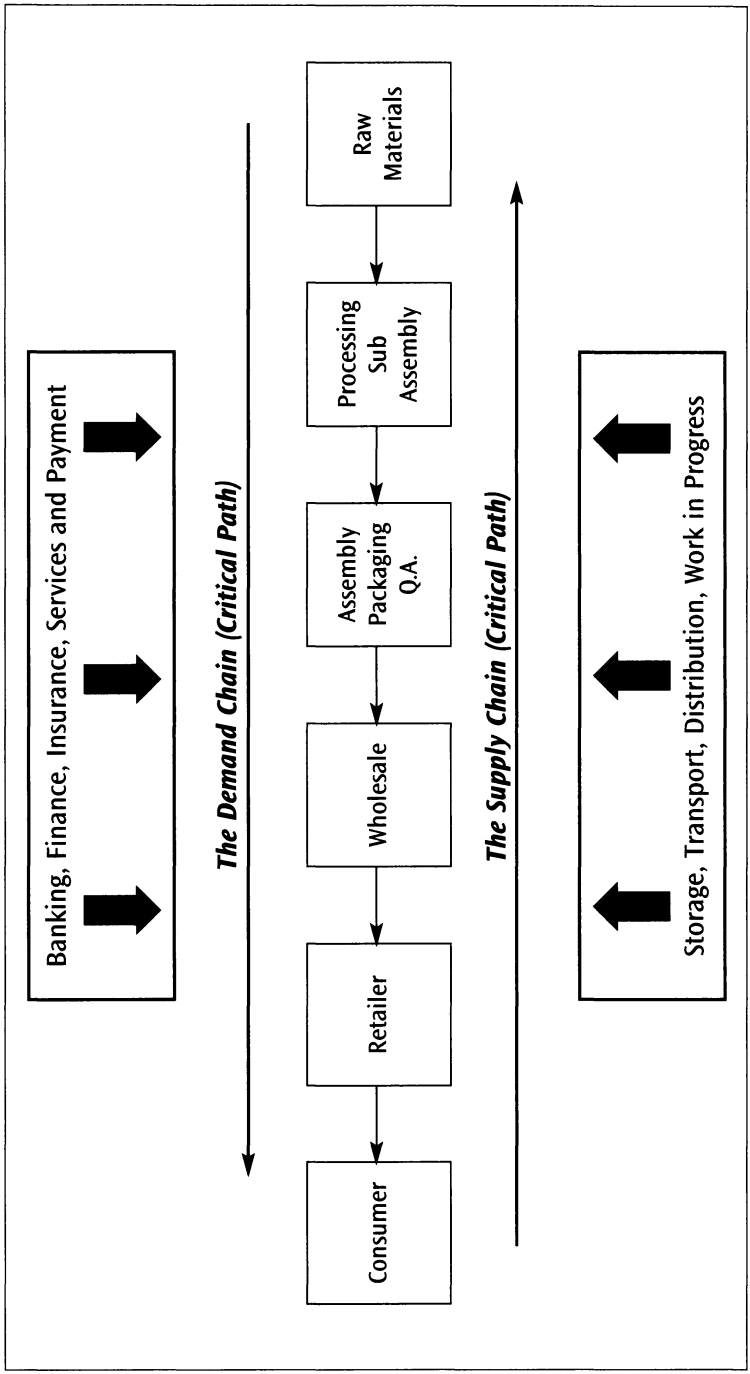


Figure 2. Supply and Demand Chain

Support information refers to client and customer support using call centres and automated enquiry techniques. It also refers to techniques such as track and trace, used to provide the support services with the information they need to provide delivery and status information.

Marketing intelligence in the EC scenario illustrated refers to the techniques of automatically (through the network) gathering data about individual clients and their purchasing patterns in order to design 'one-to-one' marketing campaigns for individual clients.

Everybody wants to be a retailer

Today's Quick Response (QR) and Just In Time (JIT) systems are a direct result of the last 70 or so years of evolution of retail-driven supply chain management methods. Electronic Commerce is the latest technological enhancement to this process; it has the potential to automate all supply chains, no matter what the industry or enterprise may be. EC offers the promise of bringing buyers and sellers together, without intermediaries. Everybody wants to be a retailer.

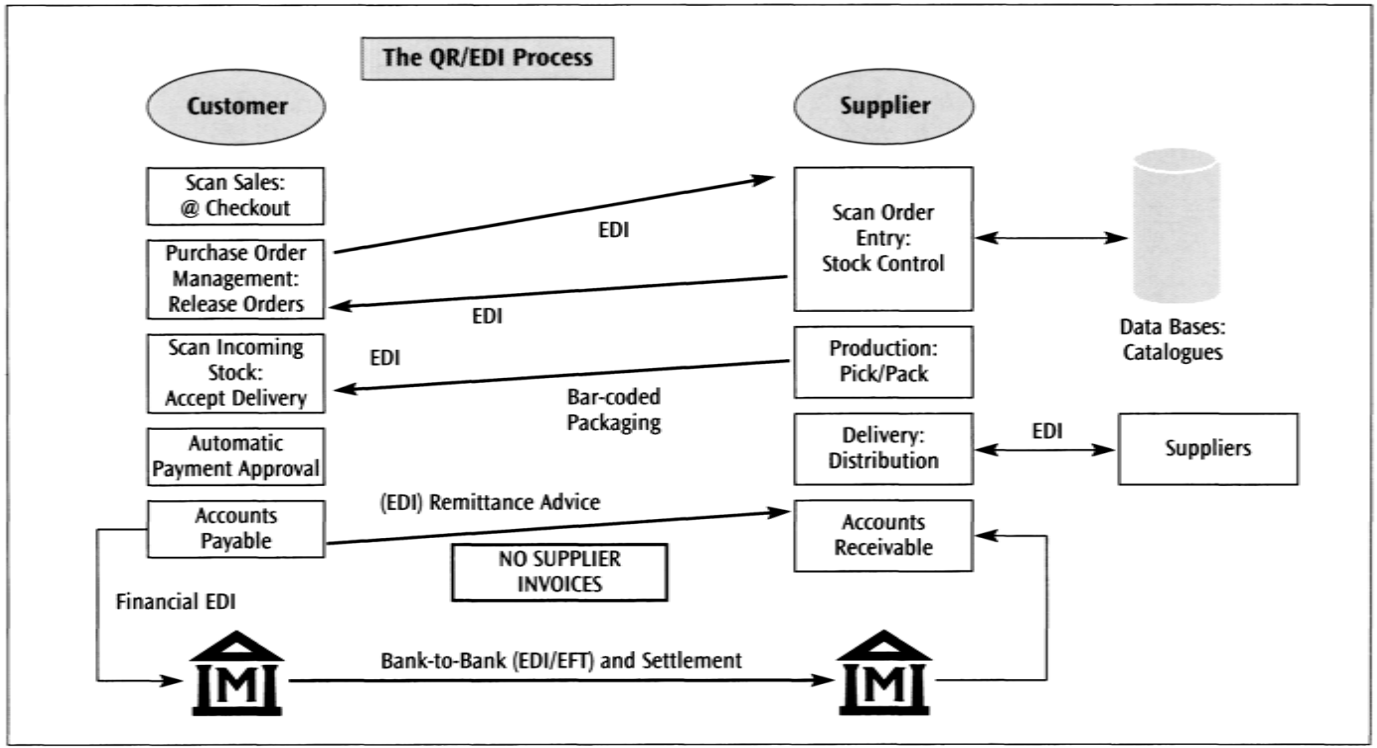
In fact the role of intermediaries will be redefined under EC, perhaps as electronic information brokers, for example. Nevertheless, traditional intermediaries are under some threat because their specialised knowledge and contacts are often neutralised in the electronic world.

Retailing

To use a nautical analogy, you cannot plot a course until you know your exact starting position. Since many people's perception of EC is that it is a retailing revolution, let us begin with retailing.

Today's retailing supply cycle has evolved over the last 100 years or so since the introduction of department stores revolutionised retailing. Quick Response characterises contemporary best business practice in the retail industry, as Just in Time inventory control does in the retail supply chain. These supply chains are now 'pulled' by electronically-captured consumer sales data. In this scenario a retail sale (i.e. the product bar code) is scanned at the point of sale. Payment is also made at the retail point of sale, increasingly by Electronic Funds Transfer at Point of Sale (EFTPOS). Sales are aggregated and transferred to the host computer where they are processed by an Enterprise Resource Planning System (ERP), Manufacturing Requirements Planning System (MRP) or Distribution Requirements Planning System (DRP) to calculate replenishment order quantities. Orders are then automatically issued by computers using Electronic Data Interchange (EDI) methods to a wide range of suppliers (see Fig. 3).

Figure 3. Supermarket Stock Replenishment



slimmed down version. This is another reason why everyone wants to be a retailer!

Similarly, EDI has so far only penetrated the first layer of the retail supply chain. EDI is difficult to integrate into the business system, especially where trading partners have tried to integrate their systems into a 'virtual supply chain'. This has also made EDI expensive. In addition, Value Added Network Services (VANS) charges, at up to $1.00 per message (send and receive), have proved to be expensive for most companies, for whom these are an additional cost. EDI generally only yields tangible benefits when a critical mass of suppliers are using the technique. Naturally, the largest EDI users get the best deals from the VANS, and no doubt from ISPs. The reverse is seen to be true for SMEs.

Finally, many banks have never truly committed themselves to open Financial EDI. They typically require a direct entry (D/E) system through a private network to a nominated bank which will then clear payments through one of the clearing processes operated by members of the banking community. This is not, however, true of the USA or some European nations but it is true of the majority of countries. A D/E user is effectively a user of the bank's own internal closed, proprietary (therefore perceived to be secure) network. In countries where FEDI is in use clearances can be made overnight or even twice a day. FEDI charges are often identical with VAN prices in this scenario, which are generally cheaper than D/E bank charges. This is one of the reasons that the Remittance Advice (R/A) is often sent by the VAN, not by a bank.

The idea of QR and JIT is to remove slack from the supply chain. The term 'slack' describes excess inventory, excess costs and excess information. The technology keys to this retailing revolution are bar coding, product numbering, industry coding systems, scanning and re-engineered systems to take advantage of these technologies. EDI is used for inter-company transactions in a standardised manner. Both communications and information are standardised, so that any company may participate. All standards used are open standards – that is, they are agreed by all participants, at industry, national and international levels.

The whole process of automating the exchange of information throughout the supply chain had become known as Electronic Commerce (EC) by around 1992–93 (see *The Journal of Electronic Commerce*, published by the EDI Group, Chicago). The same techniques have now been applied to virtually every type of industry and government enterprise. Electronic Tax Lodgement, Electronic Customs Declarations, airline passenger pre-clearance (PAXLST, or Electronic Passenger Manifest) are examples of hundreds of different initiatives.

In QR and JIT systems stock is replenished based on actual sales. Purchase orders and supply schedules are no longer based upon forecasts from buying departments. In these systems orders are electronically acknowledged by suppliers. After picking and packing, replenishment consignments are electronically notified by Advanced Shipping Notes (ASN) to Distribution Centres (DCs) before physical delivery. In this way, DCs are ready for receipt of goods at the precise time of delivery, often within 10–20-minute delivery slots, or windows. As incoming goods are processed by the DC the consignment's outer cases (cartons) are bar code scanned, the resultant data compared to the Purchase Order (PO) and the ASN files and approved for payment by the same process. Payment and payment advice is then electronically facilitated by Financial EDI (FEDI).

A DC is a special purpose warehouse designed for the JIT replenishment of shelves in fast moving goods stores such as supermarkets and economy apparel stores.

In the payment process described above, there is no need for supplier invoices – scanning of goods supplied and comparison against the Purchase Order is all that is needed. This process is known as ERS (Evaluated Receipts Settlement).

When payment is made to the supplier under this ERS system, as in many FEDI systems, the funds transfer instruction (EFT) is electronically transmitted to the payee's bank, which then informs their client, by an EDI credit advice message that payment has been received. Perversely, the remittance advice is often carried over a VANS system because, to be integrated into an ERP or back office accounts system, the detail of the remittance advice has to conform to the original purchase order in internal formats, and to the internally stored electronic invoice detail retained in the accounts receivable files. Bank supplied remittance advices correspond to the detail on a check stub – a record of payment but one with no transaction detail. That is insufficient for an integrated ERP system.

The same processes happen throughout the complete supply chain, all the way back to the raw material producers. At least this is best practice theory. In fact, it is only the very largest retailers who have embarked on such programmes, generally in the supermarket, apparel and department store industries. Discounters, chain stores and 'category killers' (for example specialist sports goods) usually have a more restricted range of goods which are often supplied on a form of consignment such as Vendor Managed Inventory (VMI). VMI means that the manufacturer or the vendor owns and manages the inventory at the store until the sale is scanned. They may use EDI for supply chain management but only in a

By mid-1999 there were approximately 250,000 EDI users around the world, including virtually all of the world's major industries and governments. Major VANS such as BT, GEIS, AT&T and IBM carry billions of these transactions each year. There are hundreds of software houses and consultancies dedicated to the professional EDI industry. Standards are well developed and supported by bodies such as the UN, ANSI and the worlds major peak industry bodies, for example EAN (European Article Numbering) and UCC (Uniform Code Council). The development of a retail consumer form of Electronic Commerce can only amplify and accelerate the well-established EC movement. EDI and 'little edi', or EDI with a less stringent application of standards using the Internet and web techniques, is at the beginning of an exponential growth which will probably lead to 1 million EDI users by the end of 2000.

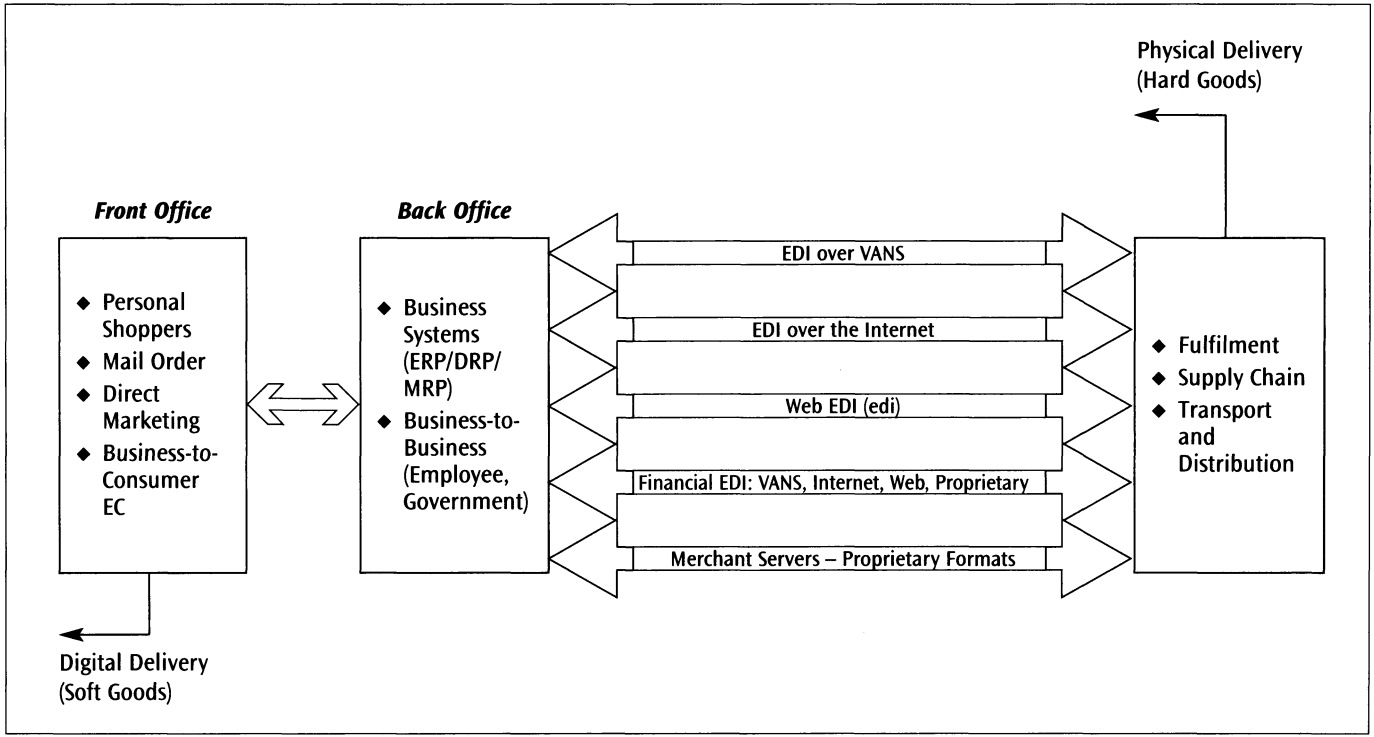
Figure 4 illustrates the position that EDI and formatted messages occupy in EC. It also highlights the role of the front office, the back office and the fulfillment and distribution operations. The front office includes all personal shopping methods, from personal visits, to mail order, to direct marketing and telephone sales to hybrid CD-ROM/EC sales. (Some companies distribute CD-ROMS containing catalogues. Provided that the user is Internet capable these CD-ROMS have 'hot links' which enable direct Internet connection to the web site of the vendor's catalogue.) As Internet bandwidth increases this hybrid form of EC will probably disappear.

The back office includes all of a supplier's internal business processes, including ERP (enterprise resource planning), MRP (manufacturing resource planning) and DRP (distribution resource planning, for retailers). It also introduces the concept of a front end to internal IT systems for business-to-consumer, employee, business and Government processes.

Figure 4 shows the types of messages that pass between back offices and the fulfillment process. These include conventional EDI, using VANS, the Internet, web EDI (or 'edi', where the message formats are proprietary rather than conforming to national or international standards). Web EDI and standards-based EDI are not mutually exclusive. In time it is probable that all forms of EDI will conform to agreed standards, but the speed of development of new Internet products has caused many vendors to bypass accepted standards in the hope either of setting new standards (i.e. their own) or making sales without commitment to the standards process, or from ignorance.

Some proprietary or closed community formats are proving quite acceptable to large corporations. For example, where two corporations have identical ERP implementations, there is no reason not to exchange messages in that context. But for open systems purposes that approach will

Figure 4. EC Information Flows



not work, since disparate message formats need to be 'mapped' to internal formats. This is the function of the EDI translation process

The big picture

Back to business processes

The main purpose of this section is to describe the complete end-to-end EC process. There is a direct correlation between EC and emerging business practices since one makes the other possible. Figure 5 illustrates the five building blocks of both EC and the emerging EC-based business practices: goods and services; point of sale and point of contact; pay and settle; fulfillment and distribution and the supply chain. Note that pre-contractual activities, such as advertising and promotion, are implicit in the point of sale activity.

Note that the diagram does not make specific reference to government systems and compliance requirements. Nevertheless, there is a huge potential for 'Electronic Government'. Government applications include electronic services delivery, electronic benefits transfer, licenses, approvals, tax lodgements, systems for the technologically and financially disenfranchised based on smart cards, government purchasing, statistics and perhaps, one day, even electronic voting and referenda!

Front office, back office

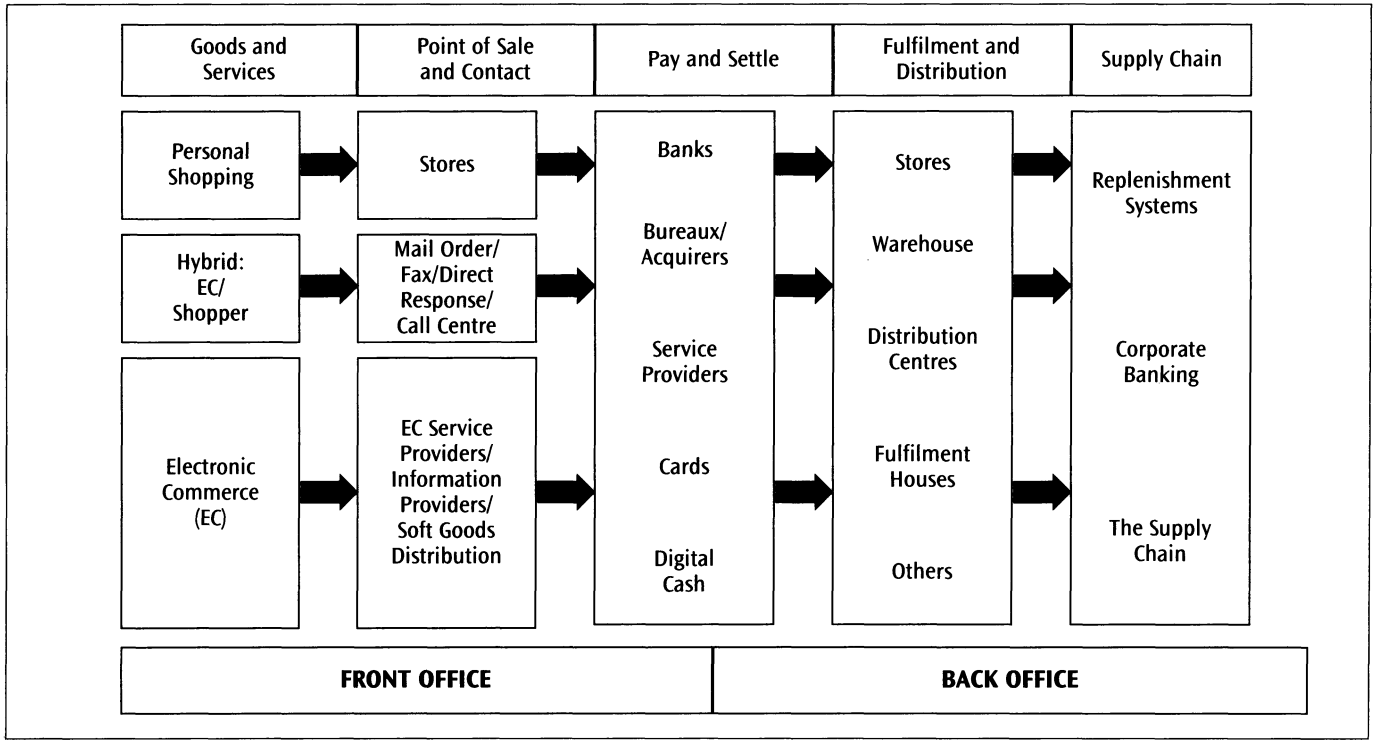
The emerging focal point for EC, especially in the commercial world, is the concept of the back office and the front office. Essentially this means the systems that enables customers (front office) to use EC to do business with an entity, or with their suppliers (back office).

The currently popular terms used to describe the function of EC are 'Business to Consumer' and 'Business to Business'. There are other categories, as Figure 6 illustrates. The expression 'business-to-business' is inexact and sometimes misleading. In EC systems it is not always possible to tell who is accessing the automated point of sale/point of contact. It could be a retail consumer buying in wholesale quantities or a business buying in retail quantities-or one of many other variants. The term confuses the technological process with the business practice. Therefore this paper uses the terms 'Front Office' and 'Back Office' for brevity and for clarity. Front Office is widely interpreted as the customer interface; Back Office as the supplier interface. However, a brief explanation of the terms 'Business to business, consumer, employee and government', etc. is included later in this annex.

Front office

The Internet is now entering its third phase. From its inception in 1969

Figure 5. The Big Picture



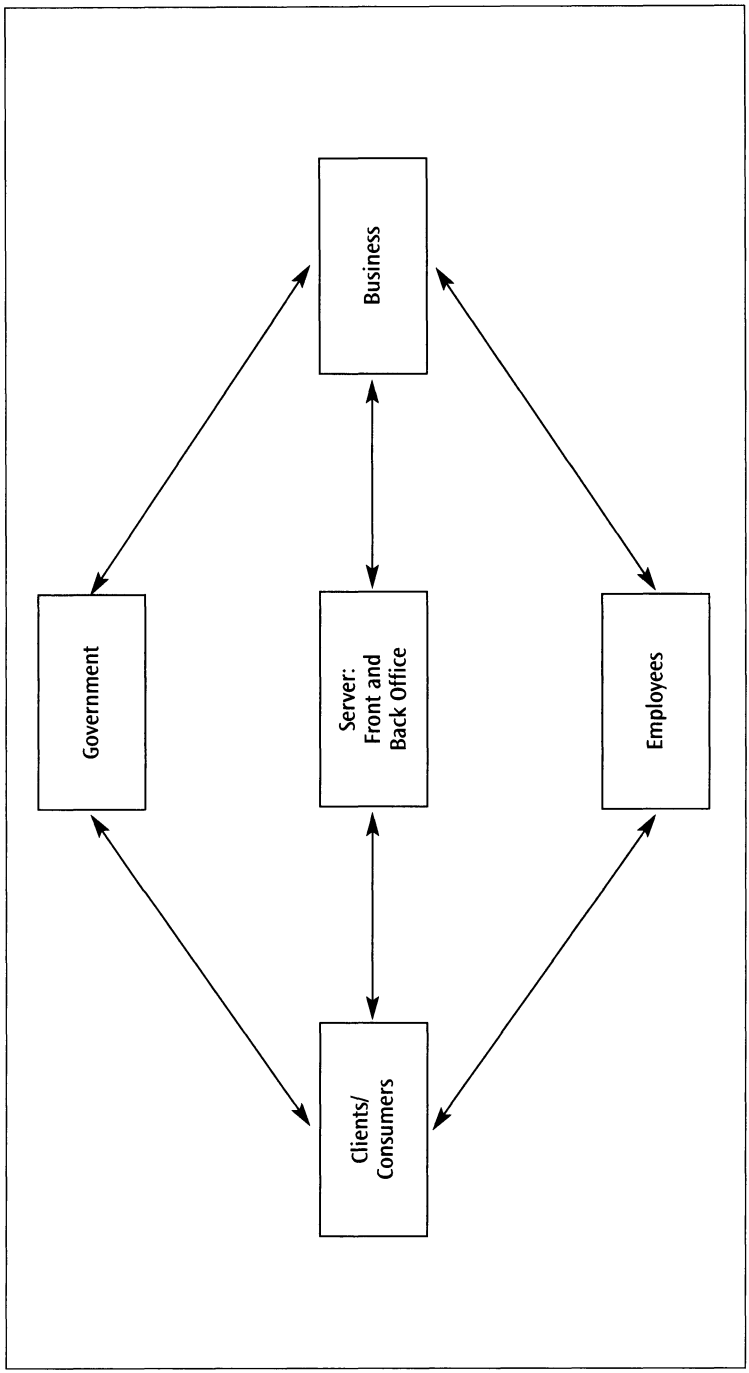


Figure 6. EC Trading Partners

the net has evolved through e-mail, web browsing and, latterly, transaction processing. Another way of looking at it is that interpersonal communications dominated the first generation of EC, even though telex, fax and e-mail may have also been used for ordering and other business purposes. The second generation took up from the point where it was possible to communicate between computers and to first automate the business-to-business and supply chain process with EDI. The web and the Internet have broadened that concept, adding multimedia, inexpensive, almost universal, access, and the ability to automate the demand chain and the MRO purchasing processes. Even greater access, new access methods, higher bandwidth, automated multilingual processes and even cheaper costs will, no doubt, characterise coming generations of EC.

Phase one: e-mail

For its first 25 years the Internet was used almost exclusively by academics, researchers and US defence personnel. The original and principal purpose was to exchange technical information by way of file transfer (file transfer protocol or FTP is the name used to describe the manner of exchanging this sort of data today) or now, more typically, by electronic mail (e-mail).

Phase two: web browsing

Over the last few years it has been possible to wander through all of the information contained on the computer files accessible by the Internet (the net) by using software called browsers, or web browsers. The term 'web' is a metaphor for the network of networks which comprises today's Internet construction. Web browsers enable any Internet user to locate and to read any 'page' of information that has been given a web address (or URL, Unique Resource Locator). This concept has become known as the world wide web (www). Hence any organisation can now create content on computer files, in any format, but generally in attractive, easy to scan and read, multimedia formats. Multimedia implies a combination of text, image, video, graphics and sound. A multimedia web page can contain all of the graphics technology used by today's video and television. The term 'page' is another metaphor, this time for an unlimited amount of information in any multimedia format that can be stored, retrieved and accessed by Internet www technology from a single address (URL).

Phase three: transaction processing

The third phase of the evolution of the Internet is emerging as 'transac'. This means that anyone using the net can actually issue commands or requests to any other computer on the net to follow certain instructions. Home shopping is the most quoted example.

The location of the home page, or the 'hosting' of a home page, is the

scene of much rapid change and turmoil. As we will see later on, during the discussion of Back Office EC, anyone who is Internet capable can host a page and become a retailer – or so it would seem. Typical home page hosts include retailers themselves, looking to complement traditional methods of retailing, to provide extra sales outlets or to achieve cost reductions. There are some 'virtual retailers' who operate without any physical stores. They just capture the transactions and obtain commissions from the manufacturer, retailer or broker, or from anyone else who actually stocks the goods. They may even obtain commissions from the courier or shipper who delivers to the home for a delivery fee which is added on to the cost of the goods. There is a wide range of other intermediaries striving to capture the transaction, such as Internet Service Providers (ISP). ISP are intermediaries who retail Internet services to the smaller user. The larger users, such as major retailers, will ultimately provide their own Internet hosts, although they may currently use an ISP for convenience.

C, B, G and E

Every technology spawns its own jargon. In the case of electronic commerce, a comprehensive new lexicon of acronyms has evolved, synonyms, abbreviations and new meanings for old words and phrases. The grammar of this EC world makes it difficult to write for anyone except for the cognoscenti, while any attempt to interpret or explain for the uninitiated runs the risk of being regarded as patronising by many otherwise well educated people. Take the terms being used to describe the trends in which buyers and sellers are beginning to change their trading patterns. Figure 6 recognises four distinct groups of buyers and sellers. In fact, the people and organisations in these groups overlap, sometimes across all four categories – business, consumer, employee and government. It is not only possible to belong to at least three of these categories simultaneously, it is also possible to do business of some sort with three, or even all of them, also simultaneously.

But that complicates matters unnecessarily. We use these four terms to differentiate the type of business, or transaction, that each generally does with the other. Further, it is implicit in the use of the term that business goes in two directions. For example, business-to-consumer is taken to mean that businesses sell to consumers. But consumers also sell to businesses in some cases: there are considerably more one-man businesses than there are corporations in the world. The following chart illustrates the potential for cross trading. It shows that in almost every case, each category is capable of doing business or to deploy electronic commerce processes with each other.

Table 1. Cross trading

	Business	Consumer	Employee	Government
Business	X	X	X	X
Consumer	X	X	X	X
Employee	X	X	X	X
Government	X	X	X	X

For example, a business entity in textiles or apparel manufacturing could sell 'seconds' or contract overruns to its employees (excess materials or garments, say); it sells them to other businesses (for example, retailers), direct to the public and to the government for government employees (for example, uniforms or nurse's clothes). Furthermore, that business will buy supplies from the individuals (outworkers), from other businesses (for example, fabrics, buttons or buckles). It may have to obtain licenses and approvals to import and export from the government; it may even bid to buy government surplus in auctions. Each case is different and complex, so that labels such as business-to-consumer can be misleading. In the event, today we consider that there are four main categories of commerce for simple categorisation: business-to-business; business-to-consumer; business-to-government and business-to-employee (B2B, B2C, B2G and B2E).

The technology vehicle for all of these activities is typically the merchant or site server, although no doubt that name will change. The function of this server is to insulate back office systems such as ERP from the communications and translation/formatting functions of electronic commerce. It is also the gateway to all the networks and services used in electronic commerce by the entity. The server thus sits between corporate IT systems and the electronic commerce service providers and their networks. It may be physically separate or just logically separate; the basic functions are still the same.

B2C: Business-to-Consumer

The idea is that a company or organisation sets up a website to enable individuals (consumers, clients, citizens) to select and buy product direct. Consumers can communicate through their own computers, kiosks or bureaux (Internet cafés), cable TV-Internet or a range of Internet devices. As previously discussed, the order may not go to the operator of the website; it might go direct to the manufacturer or retailer. If the goods or services are not offered free of charge, the payment might go to the manufacturer or retailer, but is more likely to be switched to a bank or to a card acquirer. The goods themselves can be conventional hard goods, in

which case the order is switched to a fulfillment house or warehouse, or the retailer or manufacturer. Or they can be soft goods, such as publications, software, financial or insurance services, consulting or health services, employment opportunities, real estate information, gaming or entertainment services, on-line auctions and a wide range of information or knowledge services, or many other varieties of goods and services. All may be delivered over the network to paying customers.

B2C is designed to increase sales, sales outlets, to support distributors, to reduce sales and support costs and to improve a customers options and levels of service. It offers branding opportunities and the potential to develop new, Internet enabled or enhanced products or services. Although the B2C business is not large at the moment, compared to B2B, it is nevertheless seen as a vital method of marketing, selling and distribution by those organisations wishing to place their products and services directly in front of the consumer. Investment and risk is still high; returns in the B2C arena are ephemeral at the moment, but there will be winners and losers in time.

B2B: Business-to-Business

The B2B market is aimed at specific areas of company sales and purchases. It enhances existing EDI/EC initiatives by enabling smaller members of the supply and demand chain to participate. It can remove some of the effort and costs involved in traditional EDI, especially in standards compliance, since it can translate in an any-to-any format. It also makes possible MRO automation. In addition it integrates all EC methods under a single umbrella and integrates different payment methods and message transfer between front office and back office operations, especially ERP/MRP and DRP systems integration.

B2B is possibly up to 50 times larger than B2C in financial terms. It enables sales force automation or elimination of existing sales techniques. It offers much better communications between buyer and seller – no matter where they are, a key consideration for multinationals, and much easier integration into a complete supply/demand chain strategy. There are already significant success stories in the B2B arena; there are comparatively few in the B2C area.

B2E: Business-to-Employee

A checkpoint on an emerging application area: many people will be familiar with buying a T-shirt from the company shop. Some companies now allow you to buy using the corporate intranet, or by secure remote Internet access. A variant from an emulated business-to-consumer application is where employees may have purchases deducted from the payroll, or from allowances. Allowances or entitlements for clothes or equipment

are often the norm in the armed services, police, fire services, airlines, banks, health services and so on. These systems have to keep track not only of entitlements and usage, but also accounts, sizes and up-to-date measurements, location and other variables. This application promises to be an important hybrid of business-to-consumer and business-to-business.

B2G: Business-to-Government

Annex 2 concerns electronic government and discusses it in some detail. Briefly, the aims of B2G and the other variants are to remove delay and cost from dealing with the government. This can be for a simple license application to paying fines to visas and passports to business approvals, government information, buying from government, and so on.

Electronic commerce summary

Internet enthusiasts talk about 'dog years', an analogy where one year of Internet developments equals seven years of real time. However, no matter how fast the technology moves, business processes change at relatively glacial speeds. The legacy of partners, suppliers and customers means that any change needs to be harmonised with all parties. This is one of the lessons this chapter has tried to stress. EDI has taken over 10 years to penetrate only 250,000 out of possibly 20 million corporations for whom the technology will ultimately be of benefit. EC will doubtlessly move faster, but it will still take time to become fully absorbed into business practices.

We have briefly considered e-mail, messaging, web browsing and transaction processing. Transaction processing covers the categories business-to-consumer and business-to-business, business-to-employee and business-to-government. Each of these complements existing EDI VANS based systems and also the emerging EDI initiatives over the Internet and web, forms-based EDI.

Payment systems have evolved from proprietary direct entry systems to corporate EFT to Financial EDI (FEDI) and now to FEDI over the Internet. Recent corporate purchasing card initiatives, combined with corporate electronic wallets at both consumer and business sites, hold out the promise of revolutionary re-engineered systems, especially when debit cards and stored value/smart cards, together with electronic real time statements and electronic bill presentment are taken into account.

Managers need to take a new look at their IT infrastructure when considering the brave new world of electronic commerce. Systems will soon need to faultlessly operate around the clock 365 days a year. When a business becomes dependent upon EC, even one minute of computer and net-

work systems downtime will have cataclysmic effects on the business. Companies will become differentiated by their IT systems performance, especially where suppliers and customers are also dependent upon those same systems.

Many vendors now realise that their principal asset from the client's perspective is the quality of advice they can offer, the reliability of their systems and their banking relationships, especially in time-critical 24-hour electronic banking. Vendors are also coming to realise that in addition to a consulting service, they need to offer branding and marketing services, implementation services, and development services and support – in other words professional services in all aspects of customer service. This will obviously involve partnerships, especially for global implementations and for trading partner roll out and recruitment.

Tomorrow's EC world will feature a reconfigured vendor scenario. Payment for goods and services to the IT vendor community is moving inexorably to transaction-based payment; where if the client succeeds, so will the vendor, and vice versa.

Annex 2. Electronic Government: Using EC to Improve Government Services

It is easy to complain about government – we all do it. If something goes wrong that we feel powerless about we ask: 'why doesn't the government do something about it?' The truth is that it probably is, at least , trying to. We demand more and more of our governments as we learn more about what is possible and what is needed. From a government's perspective it is a never-ending battle to provide citizens and voters with adequate public management and services from an inadequate budget. And as the world becomes even more complex we see the need for ever more government. Perhaps we will one day see Ministers for Outer Space, the Arctic and Antarctic, and even a Minister of Electronic Commerce!

If we set aside the grandiloquence of the constitution – whatever form it may or may not take – there is a reasonable set of apolitical objectives for any administration which includes:

- Acceptable levels of service for government functions;
- Economies and efficiencies, resulting in good value government;
- Personalised service;
- Equal access to government for all;
- Speed and responsiveness;
- Responsible and measurable government;
- Best practice and consistently reforming and improving government.

This final point is axiomatic. We expect government to constantly reinvent itself to match changing circumstances; to regularly redefine its relationships with the stakeholders in government. From time to time, as opportunities present themselves, we expect a fundamental transformation of government. And electronic commerce is beginning to provide just such an opportunity.

Functions of government

The following ministries, functions or departments of government are generic. They are specific to no particular country. However, they do cover many of the important functions that citizens have allocated their government to handle on behalf of the nation. Responsibilities range from policy to supervision and include:

- Administration, or the running of the day to day business of government;
- Information – typically, access to public information and sources;
- Agriculture (and fisheries);

- The arts;
- Attorney General, justice, the senior official in the legal fraternity, the legislative process and the system of justice;
- The Cabinet – the small group of Ministers who make final decisions and recommendations to the law making bodies; the administration of cabinet affairs and the select group of departments that report direct to the Cabinet, or the Cabinet Office;
- Commerce, economy and planning – those Ministries that supervise and direct the national economy and specific sectors within it. They may also be responsible for a range of licences, certificates and approvals in connection with trade and economy;
- Consumer affairs;
- Defence – the armed forces. They may also be responsible for security and the police force;
- Education and higher education – schools, universities, standards, academic staff;
- Employment – jobs, employment development, standards and obligations;
- Energy – electricity, gas, oil, etc.;
- The environment;
- Industrial relations – the arbiter between organised labour and employers;
- Exports – business promotion and facilitation;
- External relations and/or foreign affairs – the nation's gateway to other countries, including ambassadors and representatives, delegates to international agencies;
- Finance, budget and customs and the revenue raising activities of government;
- Health;
- Immigration, which may include visas, passports and some supervision of the nation's international borders;
- Internal Revenue, often used for income tax and VAT administration;
- PTT (Posts and Telecommunications);
- President/Prime Minister (see Cabinet Office);
- Science, research and development – the promotion of science in industry and academia;
- Security – internal security, intelligence, counter terrorism, police, etc.;
- SME, Small Business – the development of small and medium enterprises within the national commercial infrastructure;
- Sport – the promotion, regulation and administration of sport;
- Social Services – pensions, payments and services for individuals covered by the appropriate legislation;

- Trade, industry and industry development – focuses on assistance to selected industries deemed to be strategically important;
- Training, generally aimed at upgrading skills and increasing participation in the workforce;
- Transport – road, rail, sea, air, river, canal and lake. Covers access and carriers;
- Treasury – the custodian of the nations wealth and protector of the currency;
- Tourism – promotion and development;
- Youth – facilitating the transition between education and work, and assimilation into adult society.

It must be remembered that these functions are only identified within the context of a discussion of electronic commerce in government. They do not refer to any particular country. Many of them will be seen as overlapping. Many may also be seen as irrelevant to some countries. But the point is that the government has responsibilities for these and, as we shall see, other areas. The growth in government responsibility and in citizens expectations is almost irreconcilable. That is why government transformation, with a heavy dependence on technology, is so important.

Government businesses, agencies and commissions

In addition to ministries and major departments of government, it is likely that the government operates a variety of commercial enterprises, run either as not-for-profit or normal commercial enterprises. They may have been set up as a Government Business Enterprise (GBE) or a State Owned Enterprise (SOE), or as a publicly owned joint stock company, where all the shares are owned by the government in trust. It might also be a normal privatised enterprise with majority or minority holdings held by the government.

However, it might be none of these things. It might be set up to conduct government business in a commercial manner, in order to provide better service and to generate government revenues. It might just be to provide better access to government services at no charge.

It might also be to fulfil a statutory requirement in a business-type setting.

All of these categories, and others, are included here (note that some of these facilities may be managed at the regional or local level):

- Airlines
- Airports
- Archives and records
- Armaments – manufacture, maintenance and storage

- Audit Office
- Broadcasting
- Cargo handling
- Central/Reserve Bank
- Companies and securities offices
- Courts and judiciary
- State owned farms and agricultural/horticultural operations
- Gas production and distribution
- Housing
- Human rights and equal opportunities
- Government Information Technology
- Laboratories, research establishments, standards, weights and measures
- Libraries and museums
- Maritime operations
- Mines and mineral exploitation operations
- Oil and petroleum extraction, refining and distribution
- Parks and leisure facilities
- Police
- Ports and harbours
- Post Office
- Government procurement
- Government property and real estate
- Rail track, railway operations and rolling stock
- Regional development
- Religious affairs
- Roads and bridges
- Shipping lines
- Sports teams, facilities and institutes
- Statistics
- Telecom network and facilities
- Telecom operations
- Transport and storage
- Water and dams
- Wheat, foodstuffs.

There are clearly economic and political considerations concerning exactly which of these operations are set up and allowed to run with a degree of autonomy varying from tight government control and direction through to autonomous and independent operation. The majority of these types of operations generally operate outside day-to-day government control. They naturally have to operate within certain guidelines, budgets, and policies but, apart from that, are usually left to run the business themselves by local management.

The state owned enterprise must stay competitive to survive so that market forces can be considered the major factor in their adoption of technology, except where government has to provide the funding. In the case of Ministries and key departments, it is not that simple. The commercial imperative is often cloaked by bureaucratic processes.

Communicating with government

Every individual, every company, every agency and many external authorities need to communicate with the government at some stage throughout the year. Some require regular communications, others only communicate once or twice a year, or perhaps even less frequently for such services as passports. But as the complexity and the scale of government increases, so does the need for communication with government (see Fig. 7).

Referring to the lists of government departments or agencies, there are at least 97 different organisations listed. Many of them will have sub-organisations, regional offices and perhaps deal, in different languages, with a multiplicity of forms. Each organisation will need to communicate in person through telephone or personal visits, through faxed information, possibly even through e-mail. They will advertise their services and important information in newspapers, magazines, on radio and television, even on posters and the side of buses and taxis. There are also a range of government publications.

In addition to personal communications there are enquiries via post, telephone, fax and telex from companies, other agencies and community groups, overseas businesses and organisations, and from other governments and international agencies. The amount of paper used in dealing with the government is staggering. Government is often the single largest user of the postal system. And postal volumes are still growing at a global average of 3 per cent compound each year. Some of the largest users are Health, Social Services, Taxation, Immigration, and Economy, Trade and Industry. A few simple examples are health systems, taxation, immigration and international trade.

Health systems

We all have to see a doctor on occasion. For each visit he/she updates medical records and probably writes a prescription-in a multi-copy form. He/she also completes medical benefits forms, as does the patient at a later date. The doctor may also write referrals to a specialist. Payments may be made directly, or through a benefits system, which in itself is a major administrative undertaking.

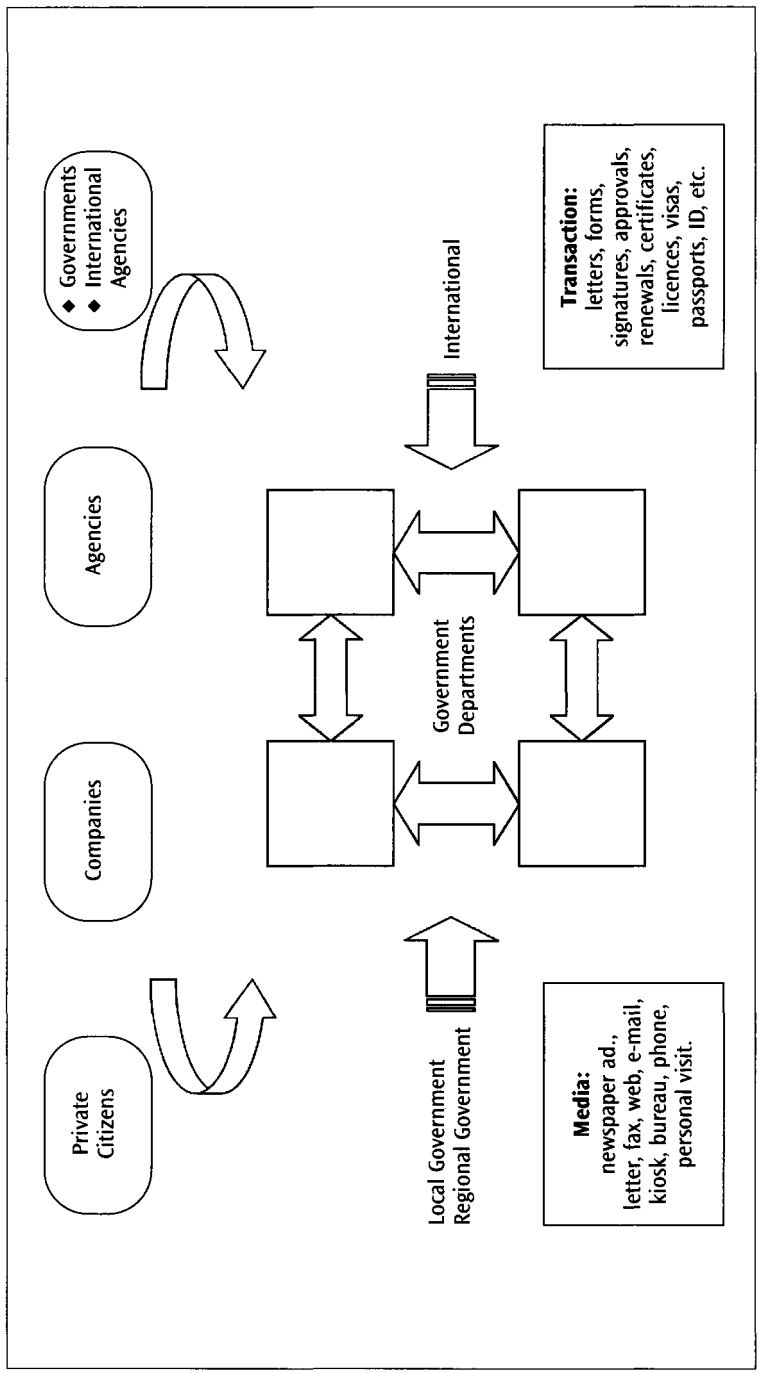


Figure 7. Communicating with Government

Following a visit to the doctor a patient may go to a pharmacy to collect prescription medication, which results in the pharmacy entering prescription details into their system, retaining a copy of the doctor's original for their files and possibly sending another copy to the regional or national health authority. It also produce labels for the medication. Each transaction in a pharmacy means that it has to update its stock records and possibly its special records for dangerous or proscribed drugs. It also has to update its medical benefit records and send details to the local health administration/authority, which in turn maintains and controls central data bases.

A visit to a doctor may result in a stay in hospital. Hospitals are possibly the biggest hotel/accommodation/catering and transport organizations in the country. They have all of the administration that goes with running such large and complex organisations. In addition, they need to operate accurate and sophisticated stock control and inventory management systems for those most expensive of products – drugs and medical supplies.

They also need booking and reservation systems for beds and hospital staff, including specialist medical staff. They need to book special facilities such as operating theatres and recuperative facilities. They need to make available the correct diets and food portions. They must accurately identify each person in the hospital at all times, from the newest baby to the most elderly patient to all staff. The convalescence and after-care process is equally complex, in some ways more so because it may depend on home visits and treatment by peripatetic medical staff. This apparently simple process of healthcare absorbs as much as 12 per cent of GDP in some advanced economies, and this figure is rising. Any inefficiencies, delays or mistakes can be extremely expensive, with even more expensive multiplier effects.

The paperwork and inter-personal communications involved in dealing with healthcare systems constitute a significant proportion of healthcare costs. Current UK forecasts indicate that, after all paper is eliminated from the system and substituted by electronic messages and communications, healthcare will represent 25 per cent of all electronic commerce messages. This same electronic commerce process is variously estimated, particularly in North America, to save as much as 20 per cent of the total cost of healthcare, not just through the elimination of much of the paper but through better inventory management and use of resources through accurate scheduling and management.

Taxation

In some form or another we all pay tax, directly through income tax and company/profit taxes, or indirectly through value added or sales taxes. In

fact, there may be many, even hundreds, of taxes levied at a local, regional, or national level, but we are generally only aware of those we see, such as income tax and VAT.

The administration of any tax is both complex and labour intensive. The government needs to create and maintain accurate records for every individual and company in the country. Then it needs to assess taxation payable, either after a declaration of income or company results, or on individual transactions. Both methods need a taxation model devised after initial taxation legislation which is capable of great flexibility in order to accommodate frequent changes. The tax administration needs to be able to handle massive volumes of information and peak loads at certain times of the year. It needs sufficient staff to handle large volumes of queries, once again at certain times of the year. Above all, it needs to be able to handle large volumes of payments and refunds, notifications of taxes payable or refunds due, a large volume of correspondence, queries and a responsive face to the public, including walk-in bureaux facilities, and possibly kiosks.

As with the health administration, there is a massive volume of paper. Each piece of paper, telephone call, or fax involving a personal query takes time to resolve. Mistakes and volume cause a percentage of errors which are even more expensive to correct. The system has a built-in level of customer dissatisfaction, with consequent avoidance and policing systems, creating more costs and even greater levels of dissatisfaction. Expense, inefficiency and public dissatisfaction – a volatile mix for government, even more so for politicians.

Immigration

If anything, immigration systems are even more unpopular than taxation systems. For example, in applying for passports, visas and ID papers, people have to complete complicated forms, sometimes in unfamiliar languages. They need to provide photographs, birth certificates, marriage and other citizenship documents, prove qualifications, legitimacy of travel and so on. Then they have to visit a government office, wait in a queue, submit to interviews and then wait for lengthy periods to await the outcome and the required document. Refusal often occurs, without adequate, or any, justification. In some cases this even applies to visitors to the country.

The amount of bureaucracy, the potential for dissatisfaction, complaint, grievance and preference are all matters for concern. Once again, this is a costly, time-consuming, unnecessarily complicated system which is universally disliked. This process is often characterised as one of the least user-friendly experiences it is possible to endure.

International trade

Although less visible to the public at large, the process of obtaining approvals for imports and exports and then of obtaining access to, or release of goods through the import/export process is a cause of wide international concern. Importers and exporters, or their trade professionals, such as freight forwarders, shipping agents or customs brokers need to obtain a very wide variety of approvals from government before goods can move across borders. Many of these approvals, widely known as technical controls, have been put in place for historical reasons, such as industry protection, consumer protection, for religious or political reasons, for collection of statistics, and for a range of other reasons that have little relevance to current trading conditions. The World Trade Organisation (WTO) and others call these types of controls 'non-tariff barriers'. All nations have their own non-tariff barriers (NTBs) but they have been carried to excess in the past. Globalisation, WTO and EU accession rules, and other regional developments, are rendering many of them obsolescent. In the meantime, they still exist. In one Middle East country recently studied there were well over 1000 categories of imported or exported goods that were subject to technical controls, many of them requiring multiple controls and approvals from several Ministries and agencies, plus Certificates of Origin from Chambers of Commerce and Certificates of Conformance (to standards) from external inspection authorities, not to mention 'legalised invoices'. In this particular case, there were 76 agencies requiring controls and approvals, each requiring signatures and stamps. The total potential permutation of controls amounted to over 11 million. And customs has to administer them all, which results in a very large number of physical inspections, which results in delays, and extra costs to traders – including bribery – and as much as 20 per cent extra on consumer goods at retail outlets. In this case, the average import took 11 days; the average export took 7 days.

Best practice import and export is measured in minutes today. These clerical, largely outdated practices add no value, but they do add costs, time, frustration and corruption to the trading system.

By replacing paper systems with a re-engineered electronic commerce based system a national penalty on trade can be replaced with a national competitive advantage, providing benefits to government, trade and the consumer.

Some examples of EC applications in government

The need for electronic commerce and for government systems and process transformation is a global imperative. Some governments have

made great strides, most particularly those with a large technology sector. But all governments can benefit

Healthcare

From the earlier scenario, imagine that the doctor, pharmacy and the hospital were all able to securely exchange information electronically. Imagine also that they could securely sign electronic documents. In this scenario, at some time in the future the patient will have a smart card which contains his medical records and electronic signature. All relevant information would be exchanged between primary, secondary and tertiary healthcare services across networks, in seconds rather than days or weeks. Any errors would be trapped by systems which are based on risk management profiles for patients, doctors and specialist staff, drugs and anaesthetics, ambulances, nursing staff, pharmacies, health benefits and so on. The risk management criteria are based on history of the individuals and processes and the likelihood of certain events taking place. When a certain level of risk is encountered it alerts experts to pay closer attention to the situation. Otherwise, all administration is removed from the critical path of healthcare. There is very little paper and few written signatures, if any. All filing and reconciliation is automated and exceptions reported by automated systems.

Hospital supplies and pharmacy supplies are replenished using electronic commerce techniques so inventory is reduced through JIT management methods.

Later developments will see the introduction of telemedicine, in which specialists can advise doctors in any area of the country, and indeed, any region of the world, by electronic commerce techniques. Similarly, home based recuperation and treatment can be achieved using similar methods.

Better quality of healthcare, less bureaucracy, more efficient service delivery with lower costs. This is the promise of electronic commerce. The benefits of this single group of applications can pay for the complete national electronic commerce infrastructure many times over.

Taxation/revenue enhancement

It is the dream of every tax official to maximise tax revenue and to eliminate tax avoidance. It is also a widespread taxpayer's desire to legally minimise the amount of tax payable, and then to defer payment. By using electronic commerce techniques each citizen can declare income and claim tax rebates using Internet service bureaux, tax agents or tax office bureaux to submit electronic declarations. In return, the tax authorities can guarantee payments of any refunds due within 14 days, transferred electronically into the citizen's bank account.

Of course, the citizen would need to be registered on the tax computer system and be authorised to submit electronic declarations to participate. Penalties for non-participation might also apply.

In order to determine the accuracy of the declaration, the tax department would need to build a model for a range of professions and industries so that their computers could automatically verify the likelihood of accuracy. They would build in risk management criteria to ensure that errors and exceptions are quickly adjudicated by experts.

The result of this sort of system includes enhanced compliance and participation in the national taxation scheme, and reduces taxes as a result. The costs of collection, validation, and exception and query handling is also much reduced, leading to greater levels of service and of accountability to both government and taxpayers. The same principles apply to all forms of tax gathering, for all taxes.

Immigration

By now, the picture for government electronic commerce applications is becoming clear. Completed forms (E-forms), electronically signed, are submitted to the government department when possible. The government department's computers perform risk management processing on the information submitted in order to validate as much of the information provided as necessary. Where original documents need to be sighted, they can be scanned in remotely, or deliberately waived if the risk management results fall within certain categories. In certain circumstances the physical inspection may still be necessary, but these can be minimized as a result of the risk management systems.

Completed documents can be printed and sealed in a local office or government bureau, for example a post office. Signatures/seals/chops can be represented by bar codes and other electronic devices.

Once again, accuracy, speed and client satisfaction can be dramatically increased, at lower costs. In this case, there is even a possibility of enhanced revenue generation since it will be possible to offer a range of optional services, for example premium for 1–4 hours, normal for 24 hours, economy for up to 5 days, etc.

International trade

The same techniques apply to that most complex of electronic commerce applications, international trade, involving customs clearance, port and harbour operations, shippers and trade professionals. The key difference here is that all of the participating government departments need to be electronically connected and to be capable of communicating electronically with all of the participants in the international trade cycle. Messages

need to be formatted to international standards; licences and certificates applied for and approved electronically. Customs clearance, involving all of the documents in use in international trade must also be submitted electronically.

The customs green and red channel processes can be re-engineered, with technological assistance, to reduce physical inspections down to less than 5 per cent of all consignments, perhaps less than 1 per cent eventually.

The results are less storage needs at ports and at customs, faster throughput of goods representing lower inventory and trader investment, reduced prices at the retail level, increased taxes and duty paid through greater compliance and, most of all, reduced-possibly eliminated-corruption. Compliance with WTO and EU rules for accession and more transparent trade are also valuable spin-offs.

Some other applications

The same principles of re-engineering, application of electronic commerce techniques and technologies, risk management and process to process automation can be applied to almost every area of government, whether it is in administration or in operating a government business enterprise. These include all the departments and agencies listed earlier, most particularly those with a heavy paper and administrative load, interactions with the public and the need for good levels of service. In particular they include:

- Publications and information
- Government procurement
- Education
- Tourism and leisure
- Transportation
- Statistics
- Social services and benefits
- Company formation, securities and company information
- SME and business development.

A final point – all of these applications are already in productive use in various government and public sector environments in several countries. They are not hypothetical examples. Electronic government is no longer theory; it will become a requirement for all modern administrations early in the twenty-first century.

Issues in the Provision of External Assistance

The Drive to Partnership: Aid Co-ordination and the Role of the World Bank[1]

Wendy Jarvie and John Eriksson

Summary

Aid co-ordination is a critical issue for small states. The review conducted by the Operations Evaluation Department (OED) of the World Bank concluded that the aid co-ordination policies of donors and the World Bank have proved ineffective to date, and that increasing aid bombardment has placed burdens on recipient countries and undermined their capacity. Developing countries have to move from being 'recipients of aid' to 'managers of aid'. To do this will require actions by donors and recipients alike:

- Donors should move to harmonise procedures and policies; stop practices that undermine capacity, such as the setting up of project implementation units separate from normal lines of authority and accountability within governments; and focus on capacity-building for aid co-ordination management within countries.
- Recipients need to improve financial accountability systems so that donors can relax demanding financial reporting and supervision requirements.

The review

The OED review was conducted over 1998 and 1999 to examine the constraints involved and progress made in helping countries assume more responsibility for aid co-ordination.[2] The methodology included: Bank surveys of country officials, local donor representatives and Bank country managers and staff; a joint survey with the United Nations Development

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

[2]This paper is based on the report 'Review of Aid Co-ordination and the Role of the World Bank', Operations Evaluation Department (OED), World Bank, 2000. The task manager for the review was John Eriksson.

Programme (UNDP)[1] of donor and multilateral development bank headquarters; an action learning workshop with senior officials from 19 borrowing countries world-wide; visits to Ethiopia, Ghana and Vietnam; and extensive literature and document reviews.

Key findings

Aid co-ordination policies have proved ineffective

Since the 1980s, the policy of the World Bank and the broader development community has been that countries should manage the aid flowing to them. The Bank's policies are expressed in the 1989 Operational Directive (OD) 14.30, and those of the broader development community in the 1986 Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) guidelines. However, the review found that there has been little success in putting recipient countries in the driver's seat. In fact, it found that many centrally determined donor and Bank policies and practices have hindered co-ordination and harmonisation efforts at country level:

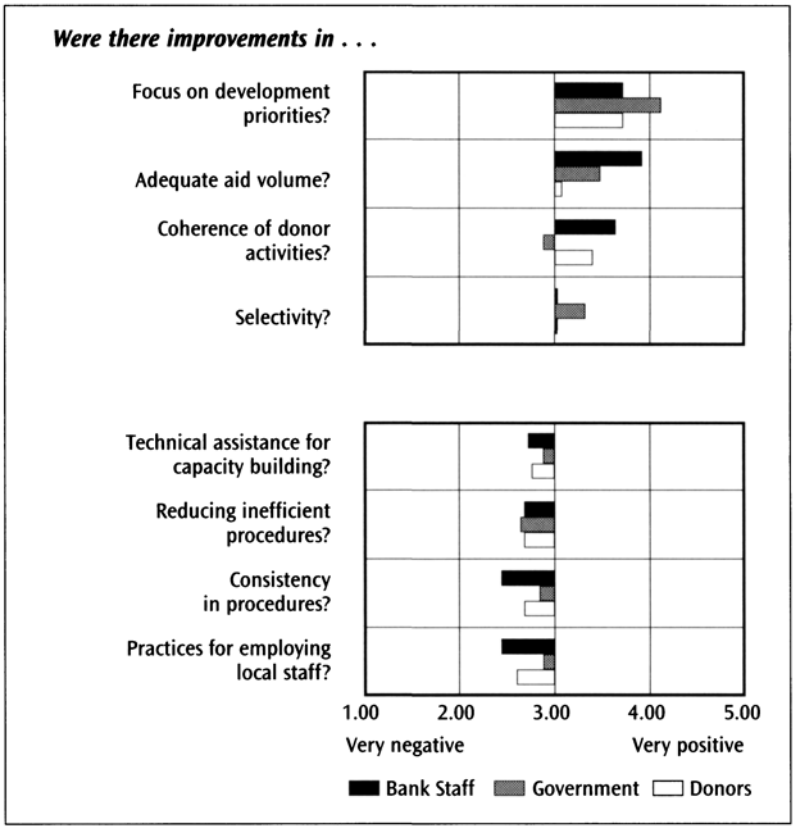
- While co-ordination has increased the focus of aid on development priorities and, in the view of Bank staff and governments, has increased the volume of aid, governments see no improvement in the coherence of donor activities, and only a slight change in the exercise of donor selectivity (Figure 1).
- Respondents perceived that, if anything, aid co-ordination efforts have been associated with a worsening both in the consistency of multilateral development bank/donor procedures and in the efficiency of their practices. They also perceived a worsening of practices in the employment of local staff, and a poor track record in improving in-country capacity (Figure 2).

Increasing aid bombardment is undermining local capacity and disempowering country leadership

Official development assistance has been decreasing. At the same time the number of the players has been multiplying. For example, donor participation in Consultative Groups grew from seven in 1960 to over 50 in the 1990s; international non-governmental organisations (NGOs) registered in OECD countries grew from 1,600 in 1980 to 2,970 in 1993. The

[1]The United Nations Development Programme (UNDP) conducted a parallel evaluation of the Round Table aid co-ordination mechanism; the Bank and the UNDP collaborated on the joint survey, participated in each other's workshops and consulted periodically.

Figure 1. Improvements in Aid Co-ordination Activities, Procedures and Practices

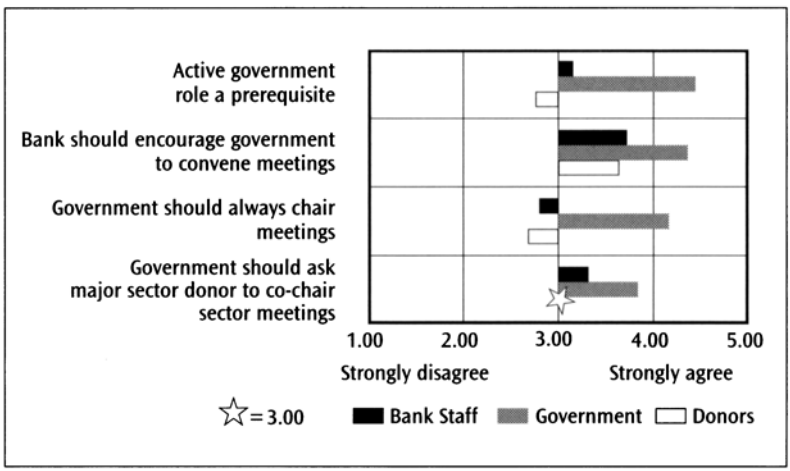


impact on some countries has been enormous – in the early 1990s Tanzania had more than 2,000 projects supported by 40 donors and all major donors were active in all major sectors. In Nepal the number of NGOs increased from 220 to 1,210 between 1990 and 1993. Each of these players has their own increasingly stringent supervision and reporting mechanisms for their constituencies. The lack of harmonisation between donors means countries have had to deal with complex and divergent reporting systems, and to deal with many different missions. Divergent donor procurement regulations, and budget and disbursement cycles further increase the transaction cots of delivering aid. Thus government capacity to plan, based on country goals, and to manage and measure for performance, has been overwhelmed by the multiplicity of procedural requirements. This has reduced country responsibility, disempowered

leaders and jeopardised the sustainability of results. In addition, the different reporting requirements have made the benchmarking of donor performance impossible, thus impeding country capacity to select donors according to comparative advantage.

For small states the problem is exacerbated. In general they have higher aid dependency; for example, average aid is 18 per cent of GNP (1996) compared to 8 per cent for other developing countries and aid per capita is $192 compared to $35 for other developing countries. On average each small state has 16 donors – fewer than larger states with 27 – but still a lot to manage.

Figure 2. In-country Aid Co-ordination Processes



Tensions and barriers

Regarding the responsibility for aid co-ordination, a central tension is the disconnection between World Bank staff and donors on the one hand, and the countries on the other. Aid-dependent governments see their role as crucial, but at the time of the surveys undertaken for the review more than half of surveyed Bank staff and local donor representatives did not see an active government role as a prerequisite for effective in-country aid co-ordination. Governments generally believed that they should chair aid co-ordination meetings (a view not generally supported by Bank staff or donors) and there was only slightly more support from Bank and donors for the major donor chairing sector meetings (Figure 3).

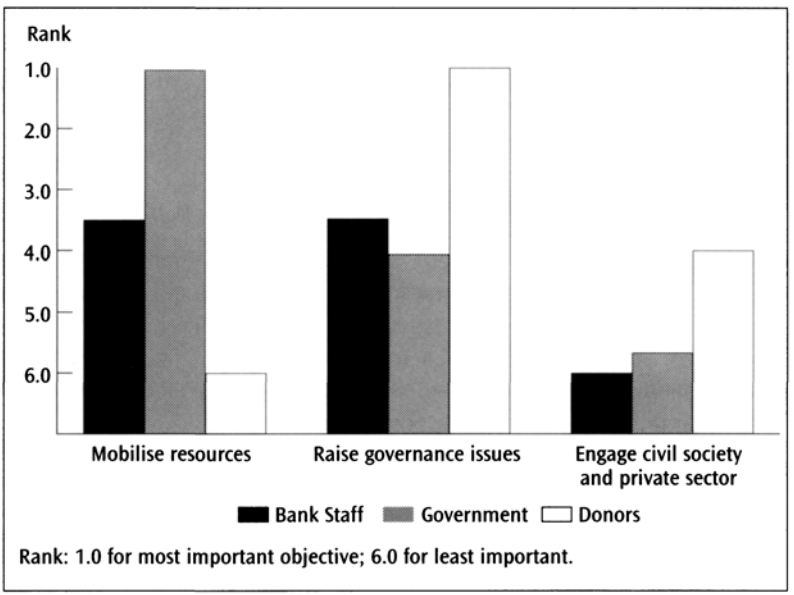
Such different perceptions and expectations of donors, governments and Bank staff have created impediments to country-led aid co-ordination.

Other impediments arise through the different objectives of aid co-ordination activities, for example:

- Donors place great emphasis on governance issues, while governments look to aid co-ordination as the way to mobilise resources;
- Most donors strongly favour greater involvement of civil society, but governments express a range of views, from cautious to critical (Figure 3).

The Bank has gained stature through its role in managing Consultative Groups, but a notable criticism in the survey (offered in writing and volunteered in interviews) was the perception of arrogance and insensitivity on the part of visiting Bank missions.

Figure 3. Objectives of Aid Co-ordination Meetings



Rank: 1.0 for most important objective; 6.0 for least important.

Actions needed

While the record of aid co-ordination policies has not been good to date, the OED review concluded that there are actions that can be taken by the developing countries, by the donors, and by the Bank.

Actions that can be taken by the *recipient country*:

- ***Improving financial accountability***. To release the pressure of donor demands, and to establish the trust that aid dollars are being well

spent, the country must demonstrate a commitment to adopt international standards of transparency and accountability. (Botswana has already done this.)

- ***Investing in developing management capacity.*** To further build confidence, governments must demonstrate institutional capacity to effectively formulate sound policy and allocate resources. (Bolivia, Ghana, Tanzania and Uganda are moving in this direction.)
- ***Promoting partnership agreements at the country-level*** between the country and its development agency partners to delineate mutual responsibility, distinct accountabilities, and reciprocal obligations to reach shared goals.

Actions to be taken by *donors and development agencies*:

- ***Active support for country-led partnerships.*** To support a shift to goal-oriented and capacity-building aid co-ordination partnerships, donors need to build support from their authorising environments to:
  - adhere to country-led efforts to achieve coherence and selectivity in the application of aid resources;
  - accommodate a mutually agreed, country-led reporting system.
- ***Support for countries' capacity-building efforts.*** In particular, given their leadership roles, the Bank and UNDP could explore a common fund for aid co-ordination capacity-building. Donors should also stop practices that undermine capacity, such as the setting up of project implementation units separate from normal lines of authority and accountability within country governments.
- ***Taking concrete steps to harmonise aid policies and procedures.*** The Bank, the UNDP and DAC should work on the global-level impediments posed by onerous aid procedures and reporting systems. While gains have been made, particularly among the multilateral development banks, steadfast commitment is needed to address the global issues of proliferation of players, procedures and processes.
- Phase out Bank-led Consultative Groups while giving adequate time and resources to nurture a commitment to reform, and to build capacity.

Instruments and approaches

A number of instruments and approaches are emerging to facilitate the development of country-led aid co-ordination. One is sector-wide approaches, which are being used increasingly to promote country leader-

ship and donor participation in a sector strategy for a country. Examples include agriculture, education, health and transport sectors in several African countries (Ethiopia, Ghana, Mozambique, Tanzania and Zambia), health in Bangladesh, and, more recently, several sectors in Cambodia and Vietnam. There are Bank lending instruments that enable country leadership, such as sector investment loans and credits and the new Poverty Reduction Support Credit being implemented under the Poverty Reduction Strategy Paper framework (in, for example, Uganda). The Comprehensive Development Framework, which is being piloted in 13 countries through the World Bank, has as its centrepiece a country's own vision of its development and the commitment of development partners to work together to achieve that vision. The Poverty Reduction Strategy Papers (written by the country with the help of the IMF and the Bank) bring in the contributions of civil society and the private sector and also provide important vehicles for development partnership and aid co-ordination improvement.

The climate is ripe for change

There is significant increase in the concern and commitment to action by the international development community, indicating the climate is ripe for change. A forum on Development Partnership jointly sponsored by the Bank, UNDP and OECD/DAC in December 1999 agreed the need for an acceleration of progress on such issues as harmonisation of donors' operational policies and procedures; capacity-building of developing countries to manage aid resources; joint monitoring and evaluation based on development progress indicators agreed with recipient countries; and improved information sharing on promising and innovate approaches to partnership. Since that Forum an OECD-DAC Task Force on Harmonisation of Donor Practices has been formed. There has also been progress on harmonisation among the multilateral development banks, particularly in procurement procedures.

Regional and Country Experiences

Economic Growth and Development: Lessons from the Experience of Cyprus – a Small Island Economy[1]

Symeon Matsis

Objectives of the paper: *This paper attempts to identify the major factors which explain the successful economic and social development of Cyprus. These will be used to draw conclusions which could be of help to other small economies in their quest for economic growth and development.*

The paper is divided into the following sections:

- *An outline of the conditions at the time of independence and the extremely adverse circumstances created by the Turkish invasion in 1974;*
- *The paper gives various indicators of the country's economic performance since independence;*
- *An extensive analysis of the factors that explain how Cyprus achieved economic development;*
- *An elaboration of some current problems of stability caused by internal developments and by changing international conditions;*
- *Relevant conclusions.*

Circumstances in 1960 and after the Turkish invasion

Cyprus is now on the doorstep of the European Union and hopes to achieve full membership in due course. Accession negotiations between Cyprus and the EU began in 1998. The possibility of membership is being considered because Cyprus has made impressive economic and social progress.

But this picture has to be viewed in its historical context; in 1960, Cyprus could only be described as an underdeveloped small island with few prospects.

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[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in St. Lucia in February 1999.

The circumstances in 1960

A team of UN consultants on a mission to advise on how the country should tackle the problem of underdevelopment wrote in its final report: 'The Government of the Republic took over in 1960 an economy with all the symptoms of underdevelopment'. These are some indicators of 1960:

- Cyprus was a predominantly agricultural country, with the agricultural sector contributing 18 per cent of GDP and 45 per cent of gainful employment;
- Exports had the usual pattern of developing countries, with primary sectors contributing 87 per cent to domestic exports, minerals 58 per cent and raw agricultural products another 29 per cent;
- Manufacturing was very limited, mostly handicraft in nature and concentrated on the processing of agricultural commodities;
- Domestic savings were very low at 6 per cent of GDP;
- The country lacked natural resources and the mineral deposits for which the island was famous were nearing exhaustion due to centuries of exploitation, while water was in short supply;
- Unemployment was very low, but large emigration was taking place. Between 1959 and 1962, 8 per cent of the population left the island;
- Cyprus, like all other small countries, was vulnerable and subject to many constraints such as:
  - Openness and extensive dependence on imports, and on exports to generate a large proportion of GDP
  - Earthquakes
  - Political instability due to internal ethnic strife and being located in the Middle East
  - Inability to achieve economies of scale and high transport costs
  - Lack of previous experience in self-government.

The situation in 1960 was not promising. Nevertheless, between 1960 and 1973, the country achieved economic and social development, as is shown by the following:

- An annual rate of growth of 7.2 per cent (see Table 1);
- Extensive restructuring with agriculture, manufacturing and tourism expanding with very high rates of growth;

- Export growth – agriculture took over as the leading sector, followed by manufacturing, while the country was becoming a net service exporter, through tourism;
- Low unemployment, which in some years fell below 2 per cent;
- An average annual growth rate of real wages of almost 6 per cent.

This was a good performance and was favourably commented upon by foreign observers.

Table 1. Average Annual Rate of Growth (%) 1960–96

1960–73	7.2
1973–75	–18.0
1975–80	11.4
1980–85	6.3
1990–97	3.8
1975–97	**6.6**
1960–97	**5.2**

Effects of the Turkish invasion of 1974

All this were shattered in 1974 with the coup and the Turkish invasion, creating a policy-maker's nightmare as the well-integrated economy suffered extensive dislocation. The following were key factors:

- Thirty-seven per cent of the territory was occupied including
  - some of the most fertile land, with a substantial proportion of farmers becoming landless
  - two-thirds of tourist facilities
  - the only international airport and deep port facility of the country;
- Thirty-four per cent of people in the areas under the control of the government became refugees. The shortage of housing affected 45,000 households;
- Between 1973 and 1975 GDP fell by about one-third;
- Gainful employment was almost halved from 253,000 to 135,000;
- In the second half of 1974 the unemployment rate jumped to 30 per cent of the economically active population;
- Between 35,000 and 40,000 people, or about 7 per cent of the total population of the areas under the control of the government, left the country.

The outcome was that a small country became even smaller and more vulnerable. It is evident that the country had to start twice over, with conditions being much more difficult the second time, not only because of the devastation of war, but also because of the 1973 crisis in supplies of oil, on which the country was completely dependent. However, the effort proved successful and economic growth and development took place.

Indicators of economic performance

The World Bank, in its book on the Asian miracle, placed Cyprus in the top 12 countries on a world-wide basis, with high rates of economic growth over the period 1960–1985. The UNDP in its 1998 Human Development Report places Cyprus twenty-third overall and first among developing countries. These references offer recognition of Cyprus's economic performance.

The average annual growth was 6.8 per cent between 1975 and 1996, and 5.2 per cent since independence in 1960 (see Table 1). As a result:

- Per capita GDP now stands at US$13,000;
- Earnings increased during the same period by an annual real rate of 5.1 per cent;
- Income distribution is satisfactory, with an overall gini coefficient of 37;
- Growth has been employment intensive, so that between 1975 and 1996 employment more than doubled from 135,000 to 282,000;
- Unemployment has not exceeded 3.7 per cent of the economically active population since 1978;
- At the end of 1997 there were 31,000 registered offshore businesses, of which 1,000 were active, contributing to exports and creating employment opportunities.

Profound restructuring has taken place:

- The primary sector declined radically; in 1996 it contributed less than 5 per cent to GDP, 11 per cent to employment and 4 per cent to total exports of goods and services (see Tables 2 and 3);
- The dominant economic force became services, particularly tourism. Services made up 71 per cent of GDP, 65 per cent of gainful employment and 73 per cent of foreign exchange earnings from the export of goods and services (see Tables 2 and 3).

Table 2. Structure of GDP 1990–96 (percentage distribution)

	1960 %	1973 %	1980 %	1997 %
Primary	22.3	16.6	11.3	4.6
Secondary	20.8	29.5	33.6	22.5
Tertiary	56.9	53.9	55.1	72.9
Total	100.0	100.0	100.0	100.0

Table 3. Structure of Employment 1960–96 (percentage distribution)

	1960 %	1973 %	1980 %	1997 %
Primary	46.9	38.5	20.51	0.2
Secondary	23.0	25.8	33.7	23.6
Tertiary	30.1	35.7	45.8	66.2
Total	100.0	100.0	100.0	100.0

Changes have also occured in other spheres:

- The female labour force participation rate jumped from 29 per cent in 1976 to 47 per cent in 1996;
- The percentage of women in gainful employment increased from 33 per cent in 1976 to 39 per cent in 1996;
- The average size of household shrank from 3.94 in 1960 to 3.23 in 1992;
- The proportion of the population living in urban areas now stands at 69 per cent;
- The age profile of the population changed, with the proportion of those over 65 increasing to 11 per cent in 1992.

Factors explaining the achievement of economic development

Attempting to explain the processes and factors that account for the achievement of economic and social development is not an easy task. It is complicated because the explanation is an amalgam of policies and other determinants. This analysis cannot hope to do full justice, but only to identify some of the elements that appear to have worked. The overall

result was the outcome of a combination of policies, institutions, manpower characteristics, geographical factors and social attitudes. This paper will attempt to identify these factors.

The overall quality of governance

The first major group of factors that could be considered to have contributed to the success of the country is the quality of government. Cyprus inherited what was believed to be a well-functioning administrative structure, including many local officials. This quality appears to have been maintained.

It is, however, not easy to have objective criteria by which to measure good governance. One piece of evidence is the comments of foreign consultants who visited the country and praised the efficient use of technical and financial assistance through the effective implementation of projects. Another element is the high credit ratings, by the various international-rating firms. Other ways of evaluating governance are:

◆ ***Macroeconomic stability and fiscal and monetary policies***

Fiscal Policy. The case of Cyprus confirms the importance of macroeconomic stability. The success of the country was built upon the strong foundation of a stable macroeconomic environment achieved through fiscal and monetary policies. Even at the time of crisis and the obvious need for a strong demand push by the government, this was exercised in a manner that did not endanger the long term stability of the country.

Macroeconomic policies were very cautious in the period immediately after independence, but developmental in content, given the adoption of planning and the existence of a separate budget for investment purposes. Macroeconomic policies provided the overall framework, the confidence and the incentives for the private sector to pursue all those activities that helped to achieve growth and development.

These cautious policies, implemented during the first decade of independence, were based on the recognition that with limited capacity to produce in the domestic market, expansionary fiscal deficits would be likely to fuel inflation and balance of payments disequilibrium. So the overall fiscal position was restraining, and in 10 out of 14 years there was no fiscal deficit. The fiscal deficits of the other four years were small at about 1 per cent of GDP, with the exception of 1973 when the figure was 3 per cent (see Table 4).

While the public sector's overall approach was conservative, the government encouraged the semi-government organisations to take a more

adventurous stance. Through government guarantees, it ensured that they were able to borrow substantial funds from abroad in order to implement investment programmes for the creation of the necessary infrastructure in electricity, telecommunications, etc.

Table 4. Public Revenue, Expenditure and Fiscal Deficits as a percentage of GDP 1960–96

	Revenue	Expenditure	Fiscal Deficit/ Surplus
1960	25.5	19.9	+5.6
1965	18.0	15.9	+2.1
1970	18.3	17.6	+0.7
1973	18.3	22.0	-3.7
1975	26.0	34.0	-8.0
1980	22.9	29.8	-6.9
1985	26.3	30.2	-3.9
1990	27.8	33.1	-5.3
1995	31.9	32.9	-1.0
1996	32.0	35.5	-3.5

In the late 1970s, because of the severity of the conditions, such as high unemployment and the collapse of economic activity, the government adopted expansionary fiscal deficits, resorted to foreign borrowing and assumed a much bigger role in the economy. This was expressed through the size of fiscal deficits, which jumped a few percentage points higher as a ratio of GDP. While between 1960 and 1973 government receipts and expenditures oscillated between 18 per cent and 22 per cent of GDP, in the years immediately after the invasion receipts fluctuated at an average of 23 per cent and expenditures at 29 per cent. Later, these percentages increased even further and today revenue absorbs 32 per cent of GDP and expenditure 38 per cent. As a result, fiscal deficits were high, and in some years reached 12 per cent of GDP. Between 1975 and 1986 the deficit averaged 6 per cent. The real expansionary effect on the economy was much bigger, given that foreign aid represented on average three per cent of GDP in the period 1975–1980.

Since then fiscal deficits have been reduced, but they continue to characterise fiscal policy. Politicians have learned to love deficits and the potential it provides for patronage. The result has been the gradual emergence of a serious public debt problem. Before the invasion public debt was declining. In 1973 total long-term foreign debt was only 7 per cent of

GDP compared to 10 per cent in 1960. Very soon after the invasion it climbed to over 40 per cent of GDP. Foreign debt has since fallen because the government chose to resort to internal borrowing, but total public debt has continued to rise and today stands at about 60 per cent of GDP.

Monetary policy. The same general conclusion can be drawn by examining the shape and effects of monetary policy and the rate of inflation. Indeed monetary expansion was moderate. The rate of growth of total liquidity, 13 per cent on average every year, kept pace with the growth of the economy (5.2 per cent) and allowed only a moderate dose of price inflation at 4.5 per cent (see Table 5). This was a commendable performance, given the limitations imposed on monetary policy by the legal cap on the rate of interest and the inability to exercise indirect methods of monetary intervention, as well as the tight labour market.

It should be noted that the annual rate of inflation was kept low, also because of the policy of relative openness in imports.

Table 5. Average Annual Rate of Inflation 1960–97 (%)

1960–70	1.1
1970–80	7.8
1980–90	4.9
1990–97	4.3
1960–97	**4.5**

◆ *The use of planning*

A second very important aspect of the overall approach of government, was the adoption of planning. At the time of independence the country faced a general climate of uncertainty. There was a complete absence of any previous experience of self-government which added to the general feeling of unease that prevailed at the time. The country was poor in resources, faced serious structural problems, depended excessively on imports, and lacked adequate infrastructure, while the effectiveness of the market system was in doubt, so there was a natural predisposition towards interventionism. This was reinforced by the advice of UN consultants, who recommended the adoption of a system of economic and social planning as a means to accelerate the process of development. The government adopted planning and the preparation of five-year development plans as the means to achieve development. This was interventionist in orientation, without abandoning the general principle of the free market economy. Hence the system of planning adopted in Cyprus was indicative in nature, in the sense that it did not substitute for the market mechanism,

but attempted to reinforce it through limited guidance. At the same time planners indicated that they did not have complete faith in the price system and advocated limited direct government involvement in production in cases where the private sector proved reluctant or where a large amount of capital was needed.

In general, planning as practiced in Cyprus proved a basic tool for the achievement of development for the following reasons:

- It helped policy to be focused and strategic, with priority ranking of projects to be implemented. In this sense planning was always targeting sectors for promotion;
- It distinguished between the medium- and long-term policies needed for development and was comprehensive, covering all matters having to do with development in a consistent way;
- It ensured the overall co-ordination of departments and other organisations involved in the implementation of policies and projects;
- It gave emphasis to projects and to implementation through the annual development budget;
- It gave the private sector a consultative role in the preparation of development plans and a central role in direct production activity, while safeguarding private property and the role of profits;
- Plans were not legally binding and were flexible, subject to readjustments in the light of changing external circumstances.

Targeting sectors to promote the role of tourism and other services. One of the important tools of planning was the targeting of sectors to promote. This element is isolated because it merits some comments. To start with it should be stated that Cyprus, when faced with the choice of which sectors to promote, opted for manufacturing and agriculture. The former, was the backbone of the Cypriot economy at the time of independence, while the latter was the normally prescribed sector in the economic literature on development. The Cypriot government began to implement protective measures and active promotion.

As a result the1960s was the decade of agriculture, which became the leading sector for growth and was dominant in domestic exports, with a 60 per cent share. Manufacturing, with an emphasis on infant industries and import substitution, registered high rates of annual expansion in the 1960s, but took off dynamically in the 1970s, when the government turned to export promotion as the only reasonable avenue for growth. This proved successful and the sector became a leader, dominating

domestic exports with a share of over 70 per cent in the 1980s, mostly to the Arab countries of the Middle East.

Since then the two sectors have been in long-term decline, to a large extent because of protection which blunted incentives and meant that entrepreneurs failed to remain competitive. It appears that high protection policies can work only in the medium term. In the long run, they create the wrong type of expectation on the part of entrepreneurs.

The other sector which received the attention of Cypriot policy-makers was tourism, for which a package of measures was introduced. The outcome was rates of annual growth that far exceeded anything that other sectors experienced. However, because the sector started from a very low level of contribution to GDP, its impact in the 1960s and 1970s was very small. It was in the 1980s that the sector became dominant in growth, job creation and foreign exchange earnings. These reached 23 per cent of GDP in the middle 1980s and are now 19 per cent. Indicative of the success in tourism is the number of tourists, which jumped from 24,000 in 1960 and reached 2.2 million in 1997. The number of available hotel beds increased from 4,300 in 1960 to nearly 100,000 today. In the process Cyprus became over-dependent on tourism and could be described as monocultural and vulnerable to fluctuations in tourism which is politically sensitive, as was shown during the Gulf War. Once again a policy succeeded only in the medium term. The longer-term effect was for the sector to lose its competitive edge and undergo a period of recession, partly because of the gradual deterioration of the environment.

The most interesting development, in terms of sectoral approach, was the gradual emergence of tertiary sectors other than tourism. The term refers to banking, insurance, transport, communications, accounting, consultancy, offshore, trade, health, public administration, etc. Looking at the historical structure of the Cypriot economy one cannot fail to observe that service sectors, including tourism, had a relatively large share in the creation of GDP, with 56 per cent at the time of independence. But the share of these sectors in employment was relatively small. However, gradually these tertiary sectors became the dominant force, contributing 62 per cent of GDP and 55 per cent of employment in the 1990s.

This happened without the direct help of the government. Indeed five-year development plans consistently underestimated the growth potential of the tertiary sectors, including tourism, while they over-estimated the potential of the primary and secondary sectors. Realised average annual rates of growth of services greatly exceed the figures projected by planners.

It is clear then that this outcome was the result of market forces which

directed interested entrepreneurs towards those activities where the economy appeared to have relative competitive advantage. This can be considered as a supply response to available resources. It was eventually recognised by planners, who invited specialists from the World Bank to look at the situation, and who strongly recommended that the development effort would have to target tertiary sectors as well.

So even though tertiary sectors did not benefit from government policies, they were able to register impressive rates of growth, because of market forces. This is not to maintain that the other sectors developed because of government action, but that they received special treatment that made their task appear easier, since in the long run the policies of protection for agriculture, manufacturing, and even tourism, have turned sour.

◆ ***Project-oriented approach – building infrastructure and institutions***

As noted above, the other important characteristic of planning was project orientation. This was a basic factor in the achievement of the goal of economic development, and was expressed through:

- the Development Plans, which provided for programmes of action;
- the annual Development Budget, the implementing tool of Plans, with the various projects;
- the projects of semi-government organisations.

This took the form of :

Investments in infrastructure. The project approach found one expression in the building of infrastructure, needed to support the activities of the private sector. Hence, the government implemented its own big programme of investments, which included:

- The establishment and upgrading of international airports;
- The expansion, improvement and upgrading of the road network. The number of kilometres of road increased from 5,900 in 1960 to over 10,400 in 1996;
- The construction of water storage capacity and the expansion and improvement of the water distribution systems. Water storage capacity increased from 6 million cubic metres in 1960 to over 300 million cubic metres in 1997;
- The establishment of industrial estates, industrial zones and zones for small artisan activities to locate manufacturing activities;
- The establishment of livestock areas and zones for the relocation of livestock farmers;

- The construction of hospitals, schools, conference facilities, fishing shelters and marinas.

At the same time the government encouraged the semi-government organisations to invest in basic infrastructure such as:

- The generation and distribution of electricity;
- The expansion and upgrading of both the domestic and the international telecommunications infrastructure;
- The expansion of ports;
- The creation of an International Fair facility.

It is indicative of the whole approach that the breakdown of investments between the broad public (public and semi-public) and the private sectors has been almost constant over the long term. Government is responsible for about 12 per cent of fixed investments and the semi-public organisations for another 12–15 per cent, leaving 70–75 per cent as the share of private enterprise. There is no doubt that the building of infrastructure was a basic factor that attracted the private sector and persuaded foreign businesses to settle in Cyprus.

Establishing institutions. A connected element in the project approach was the establishment of basic institutions. Hence, the government included in its general programme of action the creation of many institutions, which were deemed essential for the functioning of the economy. Some of the most important institutions that were established included:

- The Central Bank, the Cyprus Development Bank, the Cyprus Stock Exchange, the Housing Finance Agency and the Land Development Corporation;
- The Planning Bureau and the mechanism of planning;
- Training institutions such as the Apprenticeship Scheme, the Industrial Training Authority and the Productivity Center;
- The Ports Authority;
- The Agricultural Research Institute, the Agricultural Insurance Organisation, the land consolidation department and various marketing boards (cereals, vine products, potatoes, milk and dairy products and olive oil);
- The Institute of Technology, the Institute for the Promotion of Research, the Institute of Neurology and Genetics, and the Cyprus University to carry out research;

- The State Fairs Authority;
- The Handicraft Centre and the Cyprus Standards Authority;
- The Cyprus Tourist Organisation.

- ***Active but flexible policies***

The above description shows that government implemented active and interventionist policies. In general there was a predisposition to interventionism. What is also important to note is that these same policies were flexible and adaptable to changing circumstances. A broad survey of policies and how they changed over time will show this adaptability.

- Fiscal and monetary policies became expansionary in the 1970s compared to tight and restrictive policies used in the 1960s.
- The content of fiscal policy, which included many and varied items, was never static but changed over time. So the type of infrastructure given priority was originally the construction of dams, then the building of airports and ports, followed by road construction. A similar principle applied in the case of expenditures on social sectors, protection of activities, the structure of tariffs, etc. This process included the continuous review of the legislative framework, with a view to adapting and modernising legislation so as to ensure that it did not prove inimical to new entrepreneurial initiatives.
- Government pursued many and varied policies that encouraged investments, created employment opportunities and promoted exports or substituted imports. The policies also varied depending on the sector concerned.
- The overall policy framework did not exclude the possibility of direct involvement of government in production, in areas where the private sector was reluctant to undertake the investments because they were risky and large. Hence, the government created a national air carrier, a large fertiliser plant, the Cyprus Development Bank, an oil refinery and Cyprus Forest Industries. Although generally very limited, the overall experience proved that government was a poor entrepreneur as most of these projects did not survive, while others needed extensive subsidies. Nevertheless government was ready to abandon some of these when they failed.
- The tax regime was changed to accommodate the establishment of the Cyprus Shipping Register and the creation of the general environment for offshore enterprises. These have been very successful projects and as a result Cyprus became the fifth biggest shipping register world-wide and a centre with more than 31,000 offshore companies. The case of

offshore businesses is interesting because Cyprus entered this particular area because of the misfortunes of Lebanon, and it is indicative of how opportunities were taken up by enterpreneurs who then persuaded policy-makers to respond.

- Government introduced an ambitious housing policy, where none existed before 1974. As a result, between 1977 and 1982 the country was investing on average 12 per cent of its GDP in housing, 70 per cent of which was financed through government budgets. The number of housing units completed per year reached 8,000 a year after 1978, up from less than 5,000 in the period before 1973, in an attempt to meet the needs of the refugees as quickly as possible.
- An interesting case is the policy of reactivation pursued after the invasion of 1974, when one of the more serious consequences of the collapse of economic activity was the creation of unprecedented unemployment. This was also manifested in a sharp fall of wages. So when the government introduced a legal system guaranteeing people a minimum standard of living, it appeared that this acted as a strong disincentive to employment. Hence, the government proceeded also to introduce an incentive scheme through which it continued to pay assistance allowances at half the previous level for six months, and at a quarter for a further six months, if an unemployed person was able to find gainful employment. This acted as an extremely strong push and within three years full reactivation was achieved and the scheme was abandoned.
- Finally, policy priorities changed from advocating the promotion of primary and secondary sectors, together with tourism, towards the adoption of proactive policies in favour of other service sectors (banking and finance, insurance, business consultancy, accounting services, communication, transport, health, education, etc.).

◆ *Emphasis on education and foreign technical assistance*

When Cyprus won independence, the educational achievements of the population, were already quite good (Table 6). There was evidence of universal education at the primary level (Table 7). Despite, this relatively good background, the country put considerable emphasis on education because one of the strong beliefs of Cypriot planners was the importance of investment in human capital through education. It was understood that without the acquisition of specific skills many productive activities would not be able to prosper. The need for foreign consultants to advise on policies and projects also reinforced the urge to create an indigenous knowledge base in order to reduce dependence on foreign expertise.

Table 6. Literacy Levels 1946–92

	1946[1]	1960[1]	1976[2]	1992[3]
Men	81	91	96	98
Women	53	73	85	90
Total	67	82	90	94

[1]People aged seven years and over
[2]People aged ten years and over
[3]People aged fifteen years and over

Table 7. Gross Enrolment Ratios by Level of Education (percentage of age group) 1960–95

	1960	1976	1995
Pre-primary education			
Males	n.a.	27	60
Females	n.a.	27	59
Total	n.a.	27	60
Primary education			
Males	106	111	100
Females	102	111	100
Total	104	111	100
Secondary education			
Males	51	85	96
Females	35	80	99
Total	43	83	97
Tertiary education			
Males	n.a.	32	39
Females	n.a.	21	42
Total	n.a.	27	40

Enrolment ratios are calculated on the following ages: pre-primary 3–6 years old; primary 6–11 years old; secondary 12–17 years old; tertiary 20–24 years old

This policy resembles the one followed by the East Asian countries, as noted by the World Bank in its study of the Asian miracle. The World Bank considers education to be a basic factor in the overall achievements of the Asian countries which expanded and transformed their systems of education and training.

Hence the large number of education measures:

◆ The introduction of compulsory six-year elementary education in

1962, even though elementary education was already universal and female participation was high, with gross enrolment ratios of over 100 per cent;

- The expansion of technical vocational education and the creation of tertiary level training institutions for technicians and hotel specialities;
- Extension of free public secondary education;
- The introduction of public pre-primary education on a big scale;
- The expansion of educational opportunities by the creation of evening secondary schools;
- The raising of the age of compulsory education from 12 to 15 and its' length from six to nine years;
- The establishment of the Cyprus University.

The absence of a local university did not prevent Cypriots from acquiring university education. On the contrary large numbers of Cypriots attended universities in Europe and the USA, as can be seen from the high enrolment ratios achieved long before Cyprus had its own university (Table 7). In all these, one should include the extensive use of scholarships and fellowships awarded by international organisations and friendly countries to train people abroad in priority fields. It is appropriate, therefore, to make some observations about the role of foreign technical assistance.

The role of foreign technical assistance. A frequently discussed problem confronting small states is that because of the limited population base and the relative absence of sophiciation in the economy, it is impossible to develop all the human skills and specialist knowledge that are required for development. This is an inevitable disadvantage of small countries.

So small countries need to follow a policy that is creative and varied. One answer is the resourceful use of foreign expertise, through multilateral, bilateral or other similar schemes. Indeed this was the type of policy used extensively and in a very determined way by Cypriot policy-makers in their effort to secure the required persons with the specialist skills to provide the missing link in the drive for development and to fill identified gaps. Technical assistance from abroad took various forms:

- The most widely used form of course was in terms of foreign specialist consultants, either from international organisations or from friendly countries;
- The second line of approach was the request for scholarships and

fellowships for local people to be trained outside the country. Even though the need was usually for long-term scholaships, emphasis was placed on short-term learning experiences, since it permitted the training of more people;

- The third approach, which was an important substitute and a very cost-effective way of acquiring specialist skills and knowledge, was to have seminars and workshops organised locally by foreign groups and consultants. Again this enabled the training of more personnel.

However, some comments are called for regarding this approach and the options open to small countries.

The first comment concerns the principle that receiving countries request that donor countries or organisations submit more than one candidate for such jobs, and preferably three. This affords the option to exercise discretion and select the most appropriate candidate. But for this to be effective it is necessary to prepare detailed terms of reference and ask for a description of the formal qualifications and experience in small developing countries of the proposed candidates. It is also essential that a local counterpart is posted to work alongside the consultant and that requests are scrutinised to ensure that only priority areas are put forward.

A second comment is that an affective policy on the part of the receiving country is to provide its own allocations of funds. An allocation in the domestic budget is considered worthwhile, with high rates of return, because if a country feels the need for specialist knowledge and this is not being met by external sources, then it should make an effort to get it, through its own resources. This will also show that the need has been carefully evaluated and conveys the message that the demand is not simply made because training is available on the cheap. The allocation of funds from the country's own budget adds a dimension of choice.

A third comment concerns the possible exploitation of expatriates who emigrated in the past. These emigrants obviously do not want to abandon the prospects of professional advancement and the glamour life in the big cities of the world. But it may be possible to entice them back on short-term missions. This is a ready-made pool of talent, with a high degree of sophistication and the know-how to deal with the very specific issues of a small country.

One final comment on the general issue of the transfer of knowledge is that small countries need to make their own budget allocation for the pursuit of research to solve specific and unique problems that they face. The characteristic approach for small countries is to depend on outside assistance for the transfer of knowledge and technology. This is the right

approach for high technology, where small countries are at a disadvantage. However, without indigenous research capacity, certain issues cannot be resolved by the appeal to international experience, even if this is available from other small countries. There are unique problems which cannot be solved without local effort. Small countries must allocate increasing amounts of funds to research projects which address very specific localised and unique problems, such as specific training, managerial practices, and social and economic issues of particular concern to small societies. This is an issue that is becoming easier to deal with, because of technological progress.

◆ *Participatory policies – tripartite co-operation*

Before concluding this discussion of the overall role of government it is necessary to touch upon one other important area of policy. This refers to the participatory approach of policies evident in many of the programmes implemented. Indeed, the basic philosophy of government was that the whole development effort was co-operative in nature and anthropocentric. It was viewed as a partnership between social groups and the government and aimed at raising the standard of living of the population. Hence overall development policies were chosen for their impact on the various social groups and the mechanisms for implementation were based on the principle of tripartism.

This principle was implemented through the creation of management bodies on which the social partners (that is government, employers and workers) participated. In general, tripartism is a fact of everyday life in Cyprus.

One example is the composition of consultative committees on the preparation of five-year development plans. These committees are made up of people from the government, representatives of employees and of organised workers, or individuals with expert knowledge who are expected to comment on policies and the feasibility of proposals. This has meant that development plans have had the understanding and the support of the private sector, a fact contributing to their implementation since a large part of the responsibility for action fell on the private sector.

Another example is in the management of many institutions, such as the social insurance scheme and training institutions such as the Higher Technical Institute, the Higher Hotel Institute, the Productivity Centre, and the Industrial Training Authority. The social partners also participate in various other advisory committees. They sit on Management Boards of semi-government organisations, the Labour Advisory Council, etc.

Tripartite co-operation was a basic factor in the maintenance of good

industrial relations, despite the existence of very strong and active trade unions. An example of this was in the 1960s, when in response to a severe economic crisis, due to political events, trade unions accepted a wage freeze and refrained from submitting wage demands for three years. Similarly, when the conditions demanded it, in the period after the invasion, trade unions agreed to take a cut in salaries of 20–25 per cent and to suspend the automatic cost of living allowance, despite quite high inflation.

Participatory policies were also a characteristic of the government's approach to the implementation of social policies. On the one hand, housing policy was a major tool in the reactivation process through its multiplier effects. On the other hand, this policy helped improve the housing conditions of the refugees. The same could be said about health, welfare and education policies.

The figures indicate some good outcomes:

- In 1992 64 per cent of the population lived in owner occupied housing units, while another 23 per cent of households lived in houses provided free of charge by the government;
- The population-to-room ratio, which in 1960 was 1.30 persons per room, was 0.64 in 1992;
- 100 per cent of households now have electricity;
- 99 per cent have a telephone at home;
- 95 per cent are connected to the public water network;
- The ownership of consumer durables is universal (see Table 8);
- 99 per cent of households own a refrigerator;
- 97 per cent own a colour television;
- 91 per cent have a washing machine;
- 81 per cent own a private motor car;
- A good indicator of the effectiveness of public policies is the gini coefficient. This showed relative stability in three relevant surveys carried out between 1984 and 1996, revealing a coefficient of 0.37 (Table 9);
- Another is the improvement of the average earnings of females compared to males, which rose from 83 per cent lower in 1976 to 39 per cent in 1996.

Table 8. Ownership of Consumer Durables 1971–96 (percentage of households owning a particular durable good)

	All Cyprus			Rural		
	1971	1985	1996	1971	1985	1996
Car	33	62	81	18	49	75
Refrigerator	78	96	99	65	92	99
Washing machine	28	67	91	13	53	87
Television	49	90	97	29	82	95

Table 9. Income Distribution – Gini Coefficient 1984–97

		All Cyprus	Urban	Rural
1984/85	Household	37.0	34.2	37.0
	Per capita	n.a.	n.a.	n.a.
1990/91	Household	37.1	36.1	37.8
	Per capita	33.4	33.2	30.4
1996/97	Household	36.8	36.5	34.9
	Per capita	33.1	33.4	28.1

Based on the *Household Income and Expenditure Surveys* 1984/85, 1990/91 and 1996/97

This participatory approach again resembles that pursued by the East Asian countries and is a very effective tool in the hands of government in providing the incentives for people to contribute to the development effort.

Flexibility of human resources – seizing opportunities

One of the most important elements in the success of the effort to achieve economic and social development is the quality of human resources. Human resources in Cyprus have proved dynamic, flexible and adjustable to changing conditions, as well as responsive to new opportunities. This adaptability manifested itself in a number of ways.

One such example is the overall educational achievements, given that many pursued high educational qualification by enrolling abroad with very little government assistance.

The dynamism of entrepreneurs manifested itself in the explosion of small productive units and the continuous restructuring of the economy. Thus the economy underwent profound change and diversification through the development of different sectors, first agriculture, and then manufacturing and tourism, but most importantly the great push that the private

sector gave to other service sectors such as banking, insurance, consultancy, offshore, etc. Between 1976 and 1995 the number of establishments in the non-agricultural sectors increased from 28,000 to over 60,000, showing creativity and innovation on an unprecedented scale.

The flexibility and opportunism of Cypriot entrepreneurs was also evident in the pressure that they exercised on the government to open Cyprus to foreign businesses after the civil war in Lebanon which resulted in the transformation of Cyprus into a major offshore business centre. This opportunistic spirit led many entrepreneurs to look for the available openings in the Middle East region. As the economy expanded, these same entrepreneurs demanded that the government change its policies to allow the import of foreign workers to meet the increasing labour shortage that was driving up wages and raising production costs.

Flexibility and adaptability were the factors that first drove people to emigrate, and then induced them to return when times improved and the business environment became favourable. A closer look at emigration reveals that it took the form of mass flows of people during periods of political instability. This happened in the period 1959–62 and after the 1974 invasion. When conditions improved in the 1960s and the 1980s the flow was reversed. This same spirit guided people to seek opportunities abroad after the invasion through temporary employment. Immediately after the invasion, thousands of Cypriots sought temporary employment in the countries of the Middle East, Greece and other Balkan States. Some went on their own, some followed Cypriot businesses which secured contracts abroad and some responded to official policy initiatives to sign agreements with countries that needed workers. At the peak of emigration in 1977, 14,700 Cypriots were working abroad, representing 7.3 per cent of the economically active population.

The flexibility of response and of policies would soon be evident with the flow of people back into the country. More noteworthy was the reversal of official policy when the very fast growth of the economy and the shortage of labour induced very high increases in wages. The government then changed its approach and put in place a more liberal policy of allowing foreign workers to enter Cyprus. This led to a flood of foreign workers, rising from 3,000 in 1989 to 17,000 in 1996, representing 5 per cent of the economically active population. It is believed that the true number is now much larger because there are many workers, estimated at about 10,000, who have entered the country illegally.

The flexibility of people was also demonstrated in their response to the need to finance the development effort.

Financing needs – willingness to save and invest

One of the factors that made a big contribution to the overall success of the country was the response of the people to the need for financial resources. It is well accepted in the literature that any country aiming for growth needs to raise the level of savings and investments in order to succeed. The case of Cyprus confirms the need for enhanced savings and investment performance. Within a very short period of time after independence, people raised both their propensity to save and their willingness to invest in productive capacity. The ratios of GDP that were saved and invested were at very low levels at the time of independence, but increased significantly in response to policy measures such as tax incentives and other measures that created an appropriate business environment. However, the propensities to save and invest were badly affected by the 1974 events and fell substantially immediately after. Within a very short time, and again responding to the introduction of new policies and the reactivation of the economy, the proportion of GDP that was saved and invested climbed not only to previous levels but even higher.

Gross domestic saving in 1960 was a mere 6 per cent of GDP and rose to 17 per cent in the early 1970s. It tumbled to 1 per cent of GDP in 1975, as a result of the collapse of economic activity. It very soon responded to various policy measures and the improved economic situation and reached 27 per cent of GDP in the mid-1980s. Since then it has fallen back to 22 per cent (Table 10). This was a factor that went some way towards explaining why it was not very painful to rely so extensively on domestic resources for investment.

Table 10. Domestic Savings and Investments – Ratio to GDP (%) 1960–96

	Domestic Savings	Investments
1960	6.4	17.6
1970	14.8	23.5
1975	1.3	19.4
1980	19.5	34.2
1985	22.1	26.7
1990	27.3	24.2
1995	24.9	19.1
1996	21.6	19.4

The same pattern characterises fixed investments. In the early 1960s the ratio of investments to GDP was around 17–18 per cent, and towards the end of the 1960s and in the early 1970s it rose to between 23 and 28 per cent. It fell again in 1975 to 19 per cent but rose immediately, as people

responded to generous incentives, the pull of the foreign markets, the strong housing policy and the need to replace infrastructure and productive capacity. In the years 1977 to 1984, the average level of investment amounted to 30 per cent of GDP, giving a great push to economic activity and helping create many job opportunities. In more recent years this percentage has declined to 19 per cent (Table 10).

The figures for domestic savings and fixed investments reveal a substantial financing gap, which was reflected in large balance of payments deficits. It was partly financed by the inflow of foreign aid, the remittances of Cypriot expatriates and temporary workers abroad, but mostly through substantial borrowing by the state, semi-government organisations and the private sector.

The evidence shows that Cypriots responded to the challenge and raised the proportion of GDP that is both saved and invested, helping achieve high rates of annual growth. Indeed, investments were greater than usual, because of the emergency conditions and the severe shortages, particularly in housing, schools and infrastructure. The one important question related to the issue of financing is the role of foreign direct investment (FDI).

The role of foreign direct investment. The usual model of development emphasises the big role of foreign direct investment. Policy statements also stressed the need for FDI, to provide a bridge in funding, help overcome problems of size, expand potential markets by providing marketing outlets of international companies, and raise productivity through technology and managerial capability. All these needs were clearly identified in development plans and have been factors which slowed down the potential growth of the economy. Despite these expressed wishes, actual policy remained restrictive. Entrepreneurs did not welcome foreign participation and foreign direct investment was not facilitated. Many sectors were labelled as saturated and foreign investment entirely prohibited, while in others foreign participation was permitted only as minority shareholding, obviously another discouraging factor. Indeed the publications of the Central Bank of Cyprus made very discouraging reading for anybody interested in investing in the country. Hence, FDI was very limited, and was confined mostly to the offshore sector in accounting firms, financing activities and, to a lesser extent, in tourism and oil distribution. In manufacturing, agriculture, mining and construction, foreign capital does not participate. A high proportion of foreign capital originated from Cypriot expatriates who invested mostly in property. Therefore it did not contribute to the areas identified as needing foreign participation, such as marketing, technology and modern management.

This restrictive policy towards foreign investment has gradually been relaxed and the situation has changed. But it is indicative that the Central Bank was unable to provide adequate information. Collected data were limited to approved sums, not realised investments. Hence, actual investments may have been smaller. Nevertheless, permits can give some indication of the magnitude of FDI; they show for the past 15 years it averaged less than 3 per cent of total investment.

Development in Cyprus was mostly domestically financed and the needed bridge was provided by foreign borrowing. This is an interesting aspect of development because Cyprus is a relatively open economy, with an overall climate friendly to business and a big centre of offshore activity. However, the absence of foreign investment must, in some sense, be held responsible for the low level of productivity and the relative loss of competitiveness in recent years.

Financing needs and the role of international institutions. As has been shown, Cyprus had substantial financing deficits. Since neither the inflow of capital nor the amount of external aid were adequate to finance this deficit, the country had to resort extensively to foreign borrowing, either through multilateral institutions or through the international commercial banking institutions. This appears to have been the preferred solution. The general direction of policy was, at the beginning, to resort mostly to international financial institutions, particularly for semi-government organisations. But after the invasion, and with extremely large fiscal deficits, the government had to apply to international commercial banking institutions. During these periods, the government had to convince commercial bankers of its overall ability to generate the revenues to repay the loans. This it did, at the beginning with the stamp of approval of the IMF and the World Bank. However, with the amount of public debt gradually increasing and becoming quite large, this was insufficient. As a result, when it was deemed necessary, the government resorted to foreign borrowing.

Even if international organisations do not intend to provide direct financial assistance or lending, they can be invaluable if they are invited to help with the preparation of detailed evaluation of projects for implementation. This is the practice of the Cyprus Government which invited the World Bank and other international institutions to evaluate various projects intended for international financing. Where these received the approval of such organisations, it immediately elevated the potential for securing funds from other international and commercial financiers. It was also important for these projects to have local participation, either by the government or by the private sector. This is an area where the multilateral institutions could be of great help to small countries.

Openness and the role of exports of goods and services

It was observed right from independence in 1960 that the country, being small, exhibited the usual signs of openness and excessive dependence on foreign products. The country could not hope to produce enough food to meet even its basic needs, despite being a heavily agricultural country. It had to import both a large percentage of foodstuffs and many other commodities, such as raw materials, machinery and equipment, durable consumer goods and oil. As a result, the policy on imports had a heavy accent on protection, but at the same time permitted many items to be imported either free or at low duty. The objective was to ensure that consumers were able to find the required goods in adequate quantities and at affordable prices. A liberal import policy was essential in order to keep inflation under control. For a small country, prohibitions on imported essential commodities that could not be produced domestically would have resulted in shortages, speculative actions and exhorbitant black market prices. Hence the liberal policy as illustrated by the ratio of imports to GDP, which was 41 per cent in 1960. In the period 1976 to 1979, following the invasion, it climbed to 60 per cent. It settled at around 50 per cent of GDP in the 1980s and has fallen to 44 per cent in 1996. The openness of the Cypriot economy is even more pronounced if one includes the import of services, which were 3 per cent of GDP in the 1960s, but have since climbed to around 8 per cent. In all, imports of both goods and services amount to more than half of GDP (Table 11).

Table 11. Imports of Goods and Services as a Ratio to GDP 1960–96 (%)

	Goods	Services	Total
1960	40.5	2.8	43.3
1965	37.8	2.6	40.4
1970	43.3	4.2	47.5
1975	44.2	12.5	56.7
1980	55.8	7.3	63.1
1985	51.4	7.4	58.8
1990	50.0	7.0	57.0
1995	42.0	8.3	50.3
1996	44.8	8.5	53.3

This liberal approach to imports was essential, in that it provided a safety valve through which inflation was kept under control even in periods of excess demand in the internal market, because imported commodities experienced much lower inflation than locally produced goods and services. Between the years 1979 and 1996, price inflation of imported commodities was significantly lower at 3.7 per cent on average every year,

compared to the inflation of locally produced goods at 5.5 per cent and services at 5.8 per cent.

Openness was not only characteristic of imports, but also of exports. The country, of necessity, followed a policy which was outward in nature. This is another area in which the experience of Cyprus strengthens the evidence about the advantages of openness and its contribution to growth and development. Because of the political situation on the island and the presence of foreign troops, the role of services in exports has always been high. Thus we see that domestic exports of goods were 18 per cent of GD, at the time of independence, dominated by mineral and agricultural products. This was supplemented by a small amount of re-exports, with a share of GDP of about 3 per cent. Domestic exports remained at this level for the next 20 years, first with the growth of agricultural products replacing minerals, and then with the strong showing of light manufacturing items such as clothing, footwear and travelling apparel. The same situation was true of re-exports which remained relatively constant at 2–3 per cent of GDP. The 1980s saw a radical change. With the gradual loss of competitiveness of domestically produced goods, domestic exports fell substantially from 20 per cent of GDP in 1980 to 5 per cent in 1996. Re-exports moved in the opposite direction, experiencing very healthy growth. As a result, re-exports are now almost double the amount of domestic exports, at 9 per cent of GDP (Table 12).

Table 12. Exports of Goods and Services as a Ratio to GDP (%) 1960–96

	Goods			Services			Grand total
	Domestic exports	Re-exports	Total	Tourism	Other services	Total	
1960	18.2	2.7	20.9	2.0	9.7	11.7	32.6
1965	17.0	1.5	18.5	1.6	14.3	15.9	34.4
1970	17.7	2.2	19.9	3.6	14.4	18.0	37.9
1975	19.0	2.5	21.5	2.1	11.9	14.0	35.5
1980	19.5	3.4	22.9	9.4	13.0	22.4	45.3
1985	13.4	3.8	17.2	15.7	15.8	31.5	48.7
1990	10.0	5.2	15.2	22.5	13.8	36.3	51.5
1995	5.8	7.0	12.8	20.4	13.4	33.8	46.6
1996	5.3	9.1	14.4	18.9	13.1	32.0	46.4

However the most spectacular change took place in the export of services, which gradually assumed a dominant role, in the same way that they did in domestic production and employment. They now are more than twice domestic exports and re-exports together, and foreign exchange

earnings from tourism alone exceed those from exports and re-exports combined. In 1960 the value of earnings from tourism amounted to 2 per cent and that of other services, because of the existence of the British bases, to another 10 per cent. The share of tourism rose gradually to 9 per cent of GDP in 1980; in 1990 it stood at 23 per cent and fell more recently to 19 per cent. At the same time the share of other services showed some fluctuation, rising to almost 16 per cent in 1985 and then settling at around 13 per cent. All in all the share of exported services increased from 12 per cent 1960 to 32 per cent in 1996 (Table 12).

The evidence on both imports and exports is an indication of the openness of a small country and the need to rely more heavily on the foreign sector. This increased the degree of vulnerability of the economy, but represents the only viable alternative to expansion of production and development.

Export strategy – Customs Union with the Europan Union. It is important to also offer some comments on the general strategy of the country with regard to international trade. At first the country opted to remain within the British Commonwealth, an institution which provided access to Cypriot exports. When the UK joined the EU and abandoned the preferential treatment of Commonwealth countries, Cyprus entered into an association agreement with the EU, which leads to a customs union and the free flow of goods between the two. As a result, the country gradually liberalised its trade with the EU with reciprocal terms. The customs union provides that Cyprus must adopt the external tariff structure of the EU, which is much lower than the Cypriot one, and has meant a very substantial reduction of tariffs for third countries. Further liberalisation has taken place with the accession of Cyprus to the World Trade Organisation agreement. The country has accepted the challenges of liberalisation knowing that long-term survival could only be achieved, through trade liberalisation and expansion of exports of both goods and services.

The role of exogenous factors

All the elements analyzed above represent various endogenous factors. But economic progress cannot be attributed solely to them. Cyprus was able to achieve economic development because it was also helped by a combination of several exogenous factors. One could also term this interplay of exogenous factors as a dose of good luck. But good luck on its own cannot deliver, unless reinforced by enabling forces which transform the potential into fact. Good luck was certainly there, but it was also necessary for Cypriot businessmen were seize the opportunities and take advan-

tage of the chances that were presented to them. They were able to wrestle these opportunities from potential competitors. The fact that it was Cypriot entrepreneurs that exploited them must be considered an indication of their flexibility, presence of mind and readiness to take risks. The elements of good luck were the following.

- The crisis in Lebanon. The unfortunate experience of Lebanon contributed to avourable outcomes in Cyprus in a number of different ways:
  - The first was the fact that many thousands of Lebanese came to Cyprus with large cash balances and many stayed, making Cyprus their permanent centre of business activity when they realised the advantages of the country and found good partners;
  - Lebanon became an important customer for Cypriot products, which were exported to Lebanon through the small ports that remained operational. This trade was for domestically produced goods and also for large quantities of re-exported items. This was one of the factors that gradually made Cypriots turn their attention to re-exports;
  - The elimination of Lebanon as a source of supply for the Middle East markets. This opened the way for Cypriot businessmen who seized the opportunity and developed their business activities in the region, winning contracts and sending their exports;
  - Finally, the crisis in Lebanon opened the way for Cyprus to become a business centre. This was eventually developed through the concept of the offshore business centre, which was to prove an extremely important activity. Again this was an opportunity taken up by Cypriot businessmen who persuaded the government to change its policies and create a favourable framework for offshore activity.
- Another exogenous factor, which contributed during the first stages of reactivation, was foreign aid in money and kind which met a large part of the needs of the refugees. The assistance helped restrict deficits, both in the current account of the balance of payments and in the public sector. Between 1974–78 foreign aid constituted 12 per cent of total receipts from the exports of goods and services. With reactivation after 1978 the role of foreign assistance diminished. Again, the issue is deeper because foreign aid was put to good use. It is not enough to have access to foreign funding and technical assistance;it is also necessary to be able to make good use of it and turn it into productive and rewarding projects.

One other important external factor was the large Arab market which developed as a result of the increase in oil prices. Despite its adverse impact through the increased cost of energy, the creation of a large market proved to be more important, fully exploited by Cypriot businessmen who won construction contracts and sent exports. During the first post-invasion years the annual rate of growth of exports was more than 30 per cent, an achievement mainly connected with the large market of the Middle Eastern oil-producing countries which became the largest market for Cypriot products and replaced the EU in this role for some years. Again, the existence of the market could only be considered as potential. The fact that this potential became reality was the result of astute business practices and the exploitation of opportunities. It should also be noted that it was mostly in the Middle East markets that Cypriot workers found temporary employment.

Cyprus's strategic location at the crossroads of three continents, with access to the markets of the Middle East, North Africa and the Balkans, also played a role in this overall performance. This proved very important after the invasion, but it also had a negative aspect because of the continuous political upheavals in the area.

These are some of the external factors that contributed to economic growth and development of Cyprus.

Taking advantage of small size

Finally, what about small size? One of the basic text book recommendation for development and growth is the promotion of large organisations in order to achieve economies of scale and enhance of productivity, and therefore maintain competitiveness in the international marketplace.

This model cannot always offer the desired solutions for small countries. The experience of Cyprus is important in showing that small size matters in some instances and that small firms can become competitive if they maintain flexibility and constantly adapt to changing international and local conditions. In Cyprus, smallness has been used to provide flexibility through the proliferation of small productive units, supplemented whenever possible by the formation of strategic alliances which can offer support on the international market. As consumers demand good service and personal attention, small companies have an advantage in this area. Indeed, in Cyprus small companies enabled the country to maintain dynamism, differentiate and restructure. There has been an explosion of small units of production over the years. The situation is becoming even easier now that technological developments, such as the immense increase of the power of small computers and of small machinery which

incorporates this enhanced technology, enable small companies to achieve competitiveness. Strategic alliances and the possibility of outsourcing further enhance the potential of small companies to remain competitive; this is particularly important in service industries, where size is always advantageous and where the technology and investments needed are not large.

The lesson, then, is that smallness need not be a disadvantage. On the contrary, it can be an important advantage and should be used by small countries as a strategic option.

This is an extensive list of factors that contributed to the success of the Cypriot economy. This paper will attempt to select the most relevant for other small countries. But first an evaluation of the present situation is necessary.

Evaluation of existing conditions – the constraining factors

The Cypriot economy was able to grow and expand, differentiate and restructure. But it has reached a crossroads and it is necessary to take a hard look at the situation. The economy faces a fresh set of challenges, including globalisation. What was done in the past, and the way in which it was done, no longer suffices. The future looms uncertain and contains many challenges. Countries face a set of circumstances that is much differentiated, dynamic and competitive. In addition, the technology has greatly changed and will continue to change at an even faster pace in the future.

Given these changed external circumstances, there is a need to carefully address the adequacy of past policies. The fact that a country has succeeded in the past must be helpful for the future. But it is certainly not sufficient. It may even be asserted that in some circumstances, particularly if it creates a sense of inertia and feeling of contentment, it could prove disastrous. Hence the need to search for a more complete picture and to identify the country's weaknesses and the strengths. A tentative list appears below.

◆ ***Gradual loss of competitiveness.*** The most important problem facing the country at this point of time is competitiveness. Since 1985 domestic agricultural and industrial exports have stagnated while import penetration has increased, and the number of tourists has stopped growing. Elements affecting competitiveness are:

- *Costs:* Long-term increase in wage levels has undermined competitiveness through rising costs. As a result labour costs per unit of output have risen in Cyprus at a annual rate 2 per cent percentage points higher than in competitor countries. Given that inflation has been much higher in services in recent years, the long-term competitiveness of services is also being eroded;
- *Quality of goods and services:* As emphasised by many analysts, competitiveness also depends on quality which in the case of Cypriot products and services leaves a lot to be desired;
- *Adequacy of infrastructure:* Competitiveness will also be affected by the level and quality of infrastructure. Even though infrastructure has been upgraded over the years, its adequacy is now being questioned, particularly in crucial areas such as telecommunications, ports and airports, because of delays in implementing projects and the consequent rise in costs.

◆ ***The structure and utilisation of investment.*** Although past investment rates have often been high, the overall structure of investment is weak. For instance, 70 per cent of investment is in construction and only 20 per cent is in machinery and equipment. In most industrially advanced economies investment in machinery and equipment represents more than 40 per cent of total gross fixed capital formation. Furthermore, existing capital is only partially used at a time when the world economy operates on a 24-hour basis.

◆ ***Low technology and productivity.*** The consequence of limited investment in machinery and equipment has been a low level of technology in production, which in turn is reflected in low productivity which has been measured at less than 50 per cent of the European average. More disappointing is the fact that in recent years productivity has been growing at a slower pace than in competitor countries.

◆ ***Limited research and development effort.*** Data on research and development for 1996 show that expenditure on this activity in Cyprus barely reaches 0.3 per cent of GDP. The most competitive economies are spending 3–4 per cent of GDP on research and development. The acceleration of technological development makes the need for increased allocations urgent.

◆ ***Over-dependence on tourism.*** Foreign exchange earnings from tourism amount to 19 per cent of GDP, indicating over-dependence on this activity as reflected in the slowdown of the economy when tourism stagnated. In no other country of the EU does this ratio exceed 8 per cent.

- ***The environment.*** In the case of tourism competitiveness also depends on the state of the environment, which has suffered from an unregulated and rapid expansion of facilities. But the environment is acquiring significance of its own, given the realisation of its overall role and the pressure on resources from expanding human activity.
- ***Rigiditities in the market – liberalisation.*** The market mechanism has been deemed adequate in the past, and the implementation of the Customs Union Agreement introduced further liberalisation. But there are constraints and rigidities, such as restrictions to foreign investment, statutory ceilings on interest rates, extensive subsidies, wage indexation, inadequacy of capital markets, price caps etc. More recently protection returned through the backdoor, with export subsidies.
- ***Level of public debt.*** Despite relative stability in public finance, there have at times been high fiscal deficits, which have gradually led to an overburdening public debt. The public debt is forecast to exceed 60 per cent of GDP in 1998 compared to less than 10 per cent in 1975. The total public debt, which includes the debt to the Social Insurance Fund, has risen even more alarmingly and was nearing 100 per cent of GDP in 1998.
- ***Inefficiencies of the broad public sector.*** Cyprus inherited what was considered to be an efficient public sector. But the performance of the sector has gradually deteriorated, hampered by inefficient procedures and absence of innovativeness and consequently raising the cost of production. There is at the same time increasing meddling of political parties in the functioning of the public sector with perceived adverse repercussions. Moreover, there are a number of high cost, monopolistic semi-government organisations.
- ***Cost of social insurance and health care.*** The continuing upward trend of social costs, particularly the rising costs of social insurance and of health care, even though still low, could easily get out of control, given demographic factors.
- ***Quality of education.*** Cyprus enjoys high quantitative educational standards but many questions are being raised about the quality of the educational system as Cypriot students achieve low results in international science and mathematics competitions. Low productivity, together with the fact that methods and content of education are known to have changed very little in the past decade, raises further doubts. Overall educational standards do not meet the requirements of the twenty-first century.

- ***Adverse social attitudes.*** Finally, a basic flaw appears to be the existence of a number of social attitudes which are inimical to change and reform:
  - One of these is the culture of protection, which finds expression in the continuous appeals for state intervention. Protectionism has gradually contributed to the erosion of competitiveness as entrepreneurs have accepted high wage demands, because they were able to pass on the increases in costs to the consumer in the country's protected markets;
  - Other similarly adverse social attitudes are the feeling that since we have done well in the past within the existing framework, things should be left as they are; the short-termist approach to investments, with entrepreneurs failing to give due regard to long-term sustainability; the refusal to engage in a dialogue threatening the long-term viability of tripartite institutions and good industrial relations; and other such attitudes.

This overall evaluation of present day conditions must also take into account that the economy of Cyprus has matured and that, therefore, the high growth rates of the past are unlikely to be repeated in the future.

Concluding remarks and recommendations

The previous analysis has identified the factors that contributed to the achievement of economic growth and development in Cyprus. This is a long list of issues, but does not represent an integrated theory of development. Cyprus has its own unique circumstances and has implemented a mixture of policies, institutions, schemes and projects that suited the specific environment and the cultural endowment of its people. So it is not to be expected that any other country can copy this particular mix of policies and hope that they will work. Even if the complete mixture of elements could be copied, there is no guarantee that they would work in a different environment. But in every case there are some elements, which are easy to copy and promise results. Hence an effort will be made to identify these.

Despite much research, no unified development theory has emerged. However, there seem to be a number of important conclusions that have been widely accepted and these have been confirmed by the experience of Cyprus. These relate to issues such as:

- macroeconomic stability;
- high quality of government administration and flexible policies;

- reliance on the market mechanism;
- a strong and consistent legal system that safeguards property rights;
- a modicum of democracy;
- the relative openness of the economy;
- a high level of savings and investment;
- building of infrastructure and institutions;
- emphasis on education.

What is in no doubt, however, is that implementing these elements into a coherent set of policies is elusive. There does not seem to be an answer to the question of what are the right policies to which people are sure to respond.

Education is generally accepted as an important factor in development since the evidence shows that its expansion and diversification accompanies economic growth and development. There is as yet no conclusive evidence about the causality. Education accompanies growth but does not appear to explain it. However, all countries that have eventually achieved development, also expaneded the provision of education. Hence, it is safe to recommend education and the promotion of education is probably one of the easiest policies to implement.

The above list covers general issues that have been accepted in the literature on development. What is more interesting is to try and isolate some other elements that have been identified in the case of Cyprus and could be useful for other countries. These will be divided in two, the positive and the negative.

Positive elements:

The positive conclusions refer to the following:

- The first recommendation would be that planning and its accompanying mechanism has been a basic factor in development. It proved to be a dynamic force. Indicative planning, which is flexible and relies on the market to do most of the allocation of resources, is very useful. This is planning that relies on strategic thinking, formulates a vision of the future, translates this into targets and eventually become a programme of implementable projects. Planning is a framework for focusing and selecting priorities and includes the construction of infrastructure and the creation of a network of basic institutions. It does not substitute for the market but attempts to strengthen it and limits government direct involvement in production.

- A second conclusion is that development must be considered a partnership between social groups, particularly between employers, trade unions and the government. This found expression in the principle of tripartism and the composition of various management boards and advisory committees. But a note of caution should be voiced because it appears that sometimes the institutionalisation of contacts between the social partners may be inimical to change.
- A third recommendation is the need to adopt and implement participatory policies, as happened in the East Asian countries. Participatory policies found expression in social policies which ensured that the people shared in prosperity.
- A fourth conclusion shows that from the experience of Cyprus small size matters. In cases such as services small firms can become competitive, if they maintain flexibility and constantly adapt to rapidly changing international and local conditions. This should be supplemented by the formation of strategic alliances and outsourcing. Note that technological developments enable small companies to achieve competitiveness.
- A fifth conclusion is that to be able to resort to foreign borrowing it was important to secure the stamp of approval of international organisations. This is invaluable if they undertake the detailed evaluation of projects for implementation, because it increases the likelihood of securing funds from other international and commercial financiers. So this is an area where the multilateral institutions could be of great help to small countries.
- A sixth pointis that in order to exploit opportunities countries need enterprising businessmen. Cyprus achieved economic development aided by a combination of exogenous factors, but these were reinforced by other forces, such as the willingness of businessmen to seize opportunities, which translated chances into action.
- Finally, a comment on the role of foreign technical assistance, which is essential for small countries if they are to make up for their deficit in expert know-how and technology. One answer is the resourceful use of foreign expertise through an emphasis on scholarships and fellowships, particularly for short-term learning, which allow the training of more people. There is also a need to prepare well for foreign consultants with detailed terms of reference and the possibility of having an option to choose from more than one prospective candidate. Country allocations of funds may provide power and flexibility by conveying the message that the demand is based on the country's own priorities.

Negative elements

As far as negative conclusions are concerned, the following can be mentioned:

- One element of planning has been the targeting of sectors to promote. The government used it extensively to promote various activities. But this principle failed, because the basic tool for this was the reliance on protection, which in the long run blunted the incentives and meant that entrepreneurs failed to invest and innovate. Again experience points to the power of the market, since the various tertiary sectors that are now leading the economy were able to prosper without much government help, through the market forces.
- The experience of Cyprus confirms that government is not a good entrepreneur. Entrepreneurship is better left to the private sector which is more efficient. The government should stick to the things that can do best – public administration, provision of social services and building infrastructure.
- One interesting conclusion would be that foreign direct investment may not be needed after all since Cyprus was able to achieve development with very little foreign direct investment. However, this may only be a case of the exception proving the rule. Even though this was a commendable performance, it is nowadays looked upon as a weakness, because the absence of foreign capital did not allow the more rapid improvement of productivity, limited the penetration of Cypriot companies in foreign markets and restricted the inflow of appropriate management know-how.

But this paper cannot conclude without mentioning the very different, and potentially extremely difficult, conditions that even successful countries face at this point of time. These conditions cast a big shadow of uncertainty for the future. The Cypriot economy was able to grow and expand, but it has now reached a crossroads. What was done in the past, and the way it was done, no longer suffices. The economy faces a fresh set of challenges much differentiated, dynamic and competitive. In addition, the technology has greatly changed and will continue to change at an even faster pace in the future. So, given the trend towards globalisation and liberalisation, countries need to carefully address the adequacy of past policies. What can be of help under these circumstances is that countries remain flexible and pursue policies that ensure that the market operates and that firms enhance their competitiveness, in a spirit of co-operation with the private sector.

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The Mauritian Experience[1]

Nikhil Treebhoohun

This paper will describe the growth pattern of a small island economy which has, over the last four decades, managed to reach the status of a middle-income country, overcoming the constraints of economies of scale posed by an exiguous local market. The Mauritian experience reveals that size *per se* is not a handicap, and that ultimately economic progress depends on the will and the commitment of the political class to development, on the mobilisation and efficient management of resources, on the right market positioning, on investment in human capital and on enough policy flexibility to adjust to changing circumstances.

For those not familiar with the island, a brief overview of the geography, history and political evolution will be made to provide the setting for understanding the constraints under which economic policies had to be elaborated. Then the initial conditions prior to independence and the development strategies over the last three decades will be explained. In the second section of the paper, the factors which contributed to economic performance from 1970 to 1990 will be examined. The concluding section will examine the new challenges facing Mauritius.

The setting

Mauritius is an island of 1865 square kilometres situated in the south-west Indian Ocean, far from its major markets and suppliers. Inhabited only since the eighteenth century, the island was a French colony for almost a century till 1810 when the British conquered the island because of its strategic importance in the Indian Ocean on the route to India. The British converted it into a monocrop economy with sugar cane as the mainstay. Since the French era, slaves had been imported from neighbouring Madagascar, Mozambique and Senegal. With the abolition of slavery, indentured labourers were brought from India and a small minority even from China. Thus, by the end of the nineteenth century, Mauritius was already a multi-racial society. It is still a melting pot of European, African and Asian cultures with a population of 1.2 million, of whom less than 1 per cent is Buddhist, while 51 per cent is Hindu, 32 per cent Christian and 16 per cent Muslim.

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The diversity of races and cultures in Mauritius has not been a source of strife since independence. This is due mainly to the spirit of peaceful co-existence which exists in the island and which has its roots in the race riots of January 1968 (a few months prior to independence) which impressed upon everybody the precarious social balance and the need to coexist so as not to sink together. Co-existence also draws strength from the democratic nature of the political system, based on the Westminster type of parliamentary democracy, and the fact that the two major parties formed a coalition at independence to preserve social harmony.

Elections to the 70-member National Assembly are held regularly – normally every five years. Annex 1 lists the different political parties that have been in power to illustrate that Mauritius enjoys a robust democracy where changes of government have not had an inordinate effect on political and social stability. Political change has not led to shifts in the economic strategy which remains firmly export-oriented.

With its limited natural resources, Mauritius had few options. Agricultural land on this volcanic island consists of 48 per cent of the total land area as compared to 57 per cent in 1985. Forest and woodland take up another 35 per cent while built-up areas claim 13 per cent. All arable land is fully cultivated and is being encroached upon by demographic pressure for housing purposes and by the demand for more factory space. However, the geography of the island provides some natural advantages which have helped the tourism sector to blossom.

Spared by major natural calamities, Mauritius nonetheless is visited by cyclones in the summer, usually between December and April, which determine to a large extent the fluctuations in the growth rate of the country. Agriculture, specially sugar cane, suffers when the cyclones pass over the island, but it also suffers when they do not come close to Mauritius since then drought conditions prevail. Consequently, the economy of Mauritius is highly vulnerable to the vagaries of the weather.

The economic situation before independence

At independence Mauritius was a textbook example of a monocrop economy with no mineral resources, no entrepot trade and, apart from sugar and its by products, few manufacturing enterprises. But already from the 1820s, the economy of the island was open and was producing the crop for which it had the best comparative advantage – sugar – which is cyclone resistant and best suited to the volcanic soil of the island. Sugar exports were enough to pay for imports needed by the population so long as the price was high and the population did not increase faster than production. This situation prevailed to the end of the 1940s when malaria was eradicated.

Thereafter the rate of population increase reached 3 per cent per annum in the 1950s and it seemed destined to suffer from chronic overpopulation.

A turning point in the economic history of Mauritius was precipitated by an exogenous factor: in 1960 Cyclone Carol devastated the island and this prompted the colonial masters to set up a commission headed by Professor Meade to report on the economic and social structure of Mauritius. The Meade Report was to influence the economic and social policies of the island during the 1970s. Meade stressed the need to control demographic expansion which posed the greatest threat to economic development. Among the key recommendations were the need to diversify away from sugar and to industrialise as fast as possible. However, he noted the following potential impediments to industrial development:

- The sugar mentality which obstructed capitalist development;
- Shortage of capital;
- Absence of financial institutions and intermediaries;
- Racial division which prevented commercial and financial co-operation between entrepreneurs of different ethnic groups;
- Lack of knowledge of manufacturing outside the sugar industry.

Therefore the initial obstacles were not only economic but also psychological and sociological. How far the latter can be attributed to insularity is open to debate. The most urgent task in the early 1960s was to attract capital, to diversify the economy away from sugar to other employment-generating sectors and to slow demographic growth. To address the demographic problem, family planning and emigration (to Brazil and British Guyana) were recommended. For the relief of unemployment a policy of wage restraint was advocated to reflect the abundance of labour and to attract foreign investors; like most least developed countries in the initial stages of development, Mauritius had no local class of dynamic entrepreneurs (except for those already involved in sugar). Moreover, there was a large pool of semi-literate labour as primary education was free and universal from 1915; in 1965 the number enrolled in primary school as a percentage of the 5–11 age group was 101 per cent and 26 per cent of the appropriate age group were enrolled in secondary school.

A choice had to be made on a strategy for economic diversification. Either market forces alone could be left to create the right conditions for capital to move from sugar to other sectors, or the government could intervene to hasten the pace of diversification, as well as to ensure a more equitable distribution of income.The Mauritian Government decided to intervene both for political and economic reasons. Politically, the country

was moving towards independence and the government felt that it had to assist the development of a class of new entrepreneurs unrelated to the sugar sector. Racial heterogeneity, and more than a century of specialisation in one crop, would delay the diversification of the economy if market forces alone were left to dictate the pace of change. On economic grounds too, intervention seemed justified since returns in other sectors were not as high as in sugar. In fact this and the imminence of independence resulted in capital outflow which reached over Rs15m in 1963 and Rs12m in 1964.

The first phase of easy import-substitution thus started as early as 1962. This does not mean that a policy of closed doors was pursued. In fact foreign investors were encouraged to invest in Mauritius. The encouragement to import substitution was embodied in Development Certificates (DCs) awarded from 1964 which provided the holders with the guarantee of quantitative restrictions on imports of competing goods so that they effectively enjoyed a monopoly situation under high tariff protection. The DCs were granted on a firm-by-firm basis. Among the main import-substituting industries set up before independence were an edible oil refinery, margarine, soap, fertiliser, matches, cosmetics and paper stationery. But the limits of import substitution were reached very fast in an island of 800,000 people with a labour force of 200,000.

Post-independence economic development

Each country has its own specific characteristics, its own cultural traits and social, political and legal institutions which mould the population's psychology and determine their reactions to policy measures. This is a fact which policy-makers and consultants often ignore at their peril. Butthis does not mean that each country should re-invent the wheel. There are lessons that can be learnt from others. The discerning and effective policy-maker will understand that, while the content remains basically the same, successful implementation resides in the packaging, timing and delivery systems. With the above caveat, what are the lessons that can be drawn from the Mauritian experience?

An overview of the economy

Unlike many newly independent countries, government intervention did not go as far as nationalisation and drastic land reforms in its bid to muster capital and industrialise. The traditional capitalist class was allowed to prosper while the state became more involved in the economy. The overall approach of fostering a mixed economy has borne fruits over the last three decades. The remarkable performance in the 1980s is due mainly to a set of policies which has restructured the economy and provided

the required stimulus to investment and savings. The growth path has not been smooth: mistakes have been made, corrective action taken, policies going against economic orthodoxy have been adopted in circumstances which luckily have not up to now created major distortions, but which will now have to be addressed if the economy is to continue to grow.

Indeed, the economic indicators (see Annex 2) show that, compared with an alarming situation at independence, a substantial improvement was registered in 1990: per capita income had risen to Rs 37,095 from Rs 1438 in 1970; real growth was a respectable 7.2 per cent; the overall budget deficit fell to 2.0 per cent of GDP; and the debt service ratio was down to 9.9 per cent from a peak of 26.8 per cent in 1985. Until recently the growth rate always fluctuated with sugar production, itself dependent on the vagaries of the weather. During the 1950s, real growth averaged 2.5 per cent annually. It was to drop significantly to 1.3 per cent in the 1960s. In the 1970s the average annual growth rate was a respectable 5.6 per cent and it remained at around 6 per cent in the 1980s, the main contributor being the manufacturing sector which grew at an average of 15 per cent between 1980 and 1990, the highest growth rates being registered between 1984 and 1987 with a peak of 35 per cent in 1986.

Demographic expansion has been controlled through a vigorous programme of family planning, as well as through emigration. Whereas the population was increasing at anannual average of around 3 per cent in the 1950s, it grew at a rate of 2.4 per cent in the 1960s and 1.4 per cent in the 1970s. During the 1980s, the rate further decreased to 0.79 per cent. Mauritius seems to have come to grips with its demographic problem though now a shortage of labour has developed and the issue of an aging population is looming. In fact unemployment has been the major problem in the island. It stood at 12 per cent in 1970 and after receding to around 6 per cent in the mid-1970s, it shot up again in the wake of the 1979 oil shock and reached 17 per cent in 1981, peaking at 21 per cent in 1982. Subsequently it fell to less than 3 per cent in 1990.

Export performance has also been quite remarkable. In 1968 sugar and its by-products made up more than 90 per cent of total exports of goods. Between 1970 and 1976, total export earnings, starting from a low base, grew by 31 per cent on average per year. The rate for the period 1976–82 was 16 per cent per year, and growth averaged 22 per cent per year between 1983 and 1990. Merchandise exports totalled only Rs 361.7 million in 1971 when the first export processing zone (EPZ) firms started operating. In 1990 they reached Rs 18,246 million, a nearly fifty-fold increase in 20 years. Sugar accounted for only 32 per cent of the total. In fact, manufacturing brought in more foreign earnings than sugar in gross

terms for the first time in 1985. The composition of exports has undergone a major change as manufactured exports, specially textiles, have gained in importance.

From boom to stagnation: macroeconomic mismanagement

From independence to 1972 the situation was not bright politically or financially. Then the price of sugar started rising from £40 to £330 per tonne. At the same time the Mauritian quota under the EEC Sugar Protocol increased from 380,000 tonnes to 505,000 at a guaranteed price of £260 per tonne. The previous price was £57. The value of sugar exports rose to Rs 1584.2 million in 1974 from Rs 321.6 million in 1971. The sugar boom cushioned the first oil shock and fuelled the illusion that the economy was on the path to sustained prosperity. Substantial wage increases, as well as end-of-year bonuses ranging from 1 to 22 months' wages in certain sectors were granted to compensate workers for the austerity endured since 1968. Meade's warning that high wages plus social security plus cost of living allowances would spell inevitable ruin was forgotten. Both food subsidies and social expenditure were increased as the government pursued a policy of income redistribution and consolidation of the welfare state. Government budgetary expenditure as a percentage of GDP went up from 22 per cent in 1975 to 29 per cent in 1976 (election year) to 32 per cent in 1978.

The sense of economic euphoria clouded the recession which had already hit the world. The government launched an ambitious investment programme in infrastructure (a bulk sugar terminal, harbour development, roads and a hydro-electric plant), estimated at Rs 7.2 billion for the Plan period 1975–80. Moreover, since official development assistance was not forthcoming because of the international economic decline, the Mauritian authorities borrowed on the Euromarket at commercial rates in the belief that the recession would be short-lived. This expansionist policy showed a disregard for macroeconomic management and was to have dire consequences for the economy. The heavy injection of money resulted in double digit inflation – 14 per cent in 1973, 29 per cent in 1974 and 15 per cent in 1975. The balance of trade deficit widened, the government budget deficit expanded, workers were laid off (567 in 1976, 3581 in 1978, 4234 in 1980) and the unemployment rate soared.

Thus, even before the second oil shock, economic conditions had worsened to their 1968 level. In response, the government contracted more eurodollar loans, controlled imports and regulated prices, but allowed the real interest rate to remain negative. Taxes were increased. In fact, the tax rate was 70 per cent and company tax was 65 per cent. The tariff struc-

ture did not give the right signals to firms whose products were not intended for direct export. The overvaluation of the rupee, which had been linked to the SDR since 1975, did not help to improve the situation. The deterioration, partly due to mismanagement under political pressure, was compounded by external factors – the rise in oil prices, cyclones, strikes and interest rate hikes on the international financial markets, leading to a heavy debt-service burden. So, at the end of the 1970s the catastrophic economic situation brought home once again to the people of Mauritius the need to break away from the tyranny of sugar and engage forcefully in industrialisation and economic diversification.

Stabilisation and adjustment: getting prices right

Because of its worsening external situation, Mauritius negotiated its first standby agreement with the IMF in 1979 with the immediate objective of stabilising the economy. Emphasis was laid on demand management schemes to reduce the budget and the balance of payments deficits, and to curtail consumption and imports. The rupee was devalued in October 1979 by about 23 per cent vis-à-vis the SDR and in 1981 by another 20 per cent. At the same time the country embarked in 1980 on a structural adjustment programme (SAP) with the help of the World Bank. The aim was to lay the foundations for renewed growth by promoting export-oriented industries, by encouraging tourism and by diversifying agriculture.

A series of measures were taken to curtail consumption and encourage investment: a sales tax of 5 per cent was introduced; interest rates were liberalised; subsidies on rice and flour were reduced. Most important of all was the decision to de-link the local currency from the SDR and to attach it to a trade-weighted basket of currencies reflecting the trade patterns of Mauritius. This was intended to restore the competitiveness of domestic products which had been partially eroded by the wage increases in the second half of the 1970s. Since March 1983 the rupee has been on a crawling peg, floating downward to maintain the real exchange at a competitive level. Further, a policy of wage restraint has been vigorously followed whereby workers were given compensations lower than the inflation rate.

The tax structure was reformed and the highest marginal rates were brought down to 35 per cent. Company tax was also reduced to 35 per cent while new companies holding export certificates were charged 15 per cent for their whole lifetime. To encourage local companies to export, a graduated tax structure was set up whereby a 2 per cent rebate was given for every 10 per cent of output exported. Hence, a firm exporting 100 per cent of its products would pay only 15 per cent taxes. Tariffs were rational-

ised to be more in line with export-oriented industrialisation, quotas were removed and price controls were eliminated on all except eight basic products.

In addition to the monetary and fiscal policies adopted, some institutional reforms have been implemented and have played a significant role in the economic recovery of the country. A basic weakness in the industrial strategy was identified in marketing and investment promotion. A parastatal organisation, the Mauritius Export Development and Investment Authority (MEDIA), comprising members of the private sector, was set up in 1984 to search for new markets and to attract investors. It is responsible for ensuring the participation of local firms in international fairs. It has also organised successful investment promotion campaigns to the Far East. Many of these missions were headed by government ministers to indicate clearly to investors that the government was serious about the industrialisation of Mauritius.

Government, unions and the private sector

The government has played a key role in institution-building, infrastructure development and in creating the environment within which economic agents could function effectively to promote growth. Of course, this does not imply that all the policies it followed were necessarily the correct ones . It has been an active agent in fostering the economic growth of the island. It secured guaranteed prices and markets for sugar; it adhered to international conventions which gave Mauritian goods access to the EEC; it negotiates quotas for its textile exports with the US Government; it has provided free primary and secondary education to create a literate and adaptable labour force; it has invested heavily in physical infrastructure without neglecting social overheads. Inspired by Fabian socialism, the Labour government in the 1960s and 1970s built a welfare state which provided free health care and education and cheap housing, as well as subsidies on imported staple foodstuffs (rice and flour). In fact, the priority objective of satisfying the basic needs of the population laid the necessary social foundations which allowed the people to respond to changing external conditions relatively fast. But it also laid a shaky economic foundation which would have collapsed without the SAP of 1980.

Government intervened positively in the early stages of development to mobilise domestic and foreign capital for infrastructure development. Domestic resources can be mobilised by the private sector if the income distribution is such that savings may be made. But the major constraint facing a new state is obtaining enough foreign exchange. It can be overcome by either exporting more or by obtaining grants/loans from other

countries/institutions. Mauritius did not have any strategic or ideological importance at independence It had to ensure that the flow of foreign exchange from sugar exports would be stable so as not to handicap investment efforts. The Commonwealth Sugar Agreement guaranteed a favourable price but was due to expire when the UK joined the EEC.

Government had to negotiate stable prices and preferential treatment from the EEC. This could be achieved by enlisting the support of EEC member countries. Therefore, foreign policy takes on a dimension of its own in the economic development of a small country. Mauritius joined the Non-Aligned Movement and the Organisation of African Unity, as well as the Organisation Commune Africaine et Malgache (the French equivalent of the Commonwealth) which disintegrated in the late 1970s. In June 1973 Mauritius signed the Yaoundé Convention which gave preferential tariffs to EEC goods and duty-free and quota-free access to EEC markets. This treaty also enabled the island to benefit from financial aid from the European Development Fund and the European Investment Bank. The Lomé Convention provided Mauritius with sufficient market openings for its growing textile industry. In addition it guaranteed a market for the sugar industry under the EEC-ACP Sugar Protocol at a price usually higher than the world price. During the sugar boom the guaranteed price was lower than the world price but Mauritius respected the clauses of the convention in violation of the profit-maximising motive and it was thus able to increase its share of the sugar quota to 505,000 tonnes per year, which represents on average about four-fifths of its annual sugar production.

A more debatable area of government intervention is the labour market. The comparative advantage of small labour-rich countries lies in keeping down its labour costs – the only costs which can be effectively controlled domestically. This can be done by crushing all militant trade unions, outlawing them or recognising only pro-government unions as was the case in some countries in the Far East. In Mauritius this course of action was not possible because of a strong trade union tradition and because of its democratic system. Instead a quite repressive law (the Industrial Relations Act) was passed in 1973, mading all strikes effectively illegal. At the same time various institutions were set up to prevent industrial relations from becoming explosive. A tripartite committee, consisting of the government, the private sector and the trade union federations, has met annually since 1977 before the Budget is presented, to discuss cost of living allowances in both the public and private sectors. A special body, the National Remuneration Board (NRB), set up under the IRA, is responsible for fixing minimum wages and conditions of service in the private sector. If employers and workers cannot reach an agreement, they

take their case to the Industrial Relations Commission which has powers to settle conflicts. The Ministry of Labour also performs a conciliatory role in disputes.

The mechanisms for wage-dispute settlements and collective bargaining have contributed significantly to social stability. There has been no major strike since 1979. Moreover, government intervention did introduce rigidities in the labour market, especially in the agricultural sector. Similarly, the fixing of lower minimum wages for women than for men in manufacturing did have negative repercussions until corrected under the SAP in the early 1980s. More flexible labour regulations obtained in the EPZs which were then considered as enclaves. Nonetheless, from an economic viewpoint, the system does not satisfy either efficiency or equity criteria: it is not dynamic nor flexible enough to reward productivity and scarce skills; although it is meant to compensate employees for cost of living increases, it has been guided by the principle of tapering compensation, with the lowest paid receiving the full increase. This has led to a reduction in wage differentials, especially in the public sector which has become more 'bottom weighted'. To redress the situation, the salary structure is reviewed every five years, resulting in sudden massive increases in the salary bill and in the money supply, with its concomitant pressure on the government budget and on inflation.

Yet the tripartite committee, even with its imperfections, has served a very useful purpose in consensus-building, the cornerstone of the Mauritian success. It provided a critical forum for the major social and economic players to air their views and their discontent. Of even greater importance has been the very effective collaboration between the government and the private sector. It is this collaboration (at times on a very informal basis) which has led to certain key initiatives being taken, like the setting up of the EPZ, the first hotels being built, the successful negotiations on the Sugar Protocol, the creation of the national airline, the establishment of a stock exchange and a freeport, investment in Mozambique, the implementation of a value-added tax, etc. It happens also that this proximity between individuals in the private sector and politicians may also lead to what Bhagwati calls DUPS (directly unproductive profit seeking activities). Nonetheless, in the case of Mauritius, the public-private sector partnership has had a positive overall balance. How did it happen?

The private sector in Mauritius has always been well organised. Already in the last century, institutions like the Chamber of Commerce and Industry and the Chamber of Agriculture were set up to defend the interests of their members. The private sector was then made up mostly of

Franco-Mauritians who had to deal with the British colonialists. The racial homogeneity must surely have played an important part in the strength of the institutions. They maintained their relevance after independence by opening up gradually and here the advantages of smallness stand out. The government, and especially the Prime Minister, had to trust the private sector and vice versa. The private sector, therefore, two years after independence established a Joint Economic Committee to coordinate a private sector macroeconomic position and appointed as coordinator Mr Paturau, who had been a government minister before independence, to fulfil the role of interface between the private sector and government. This facilitated high-level talks with the government as the private sector could speak through (and with) one voice. Confidence-building and consensus-seeking could be carried out in a structured, constructive way to ensure that frictions did not develop into full-blast conflicts.

While there was still a high level of mistrust between the private sector and the civil service in the 1970s, the relationship improved in the 1980s when private sector representatives were appointed as members and chairmen of various Boards of Administration of parastatal bodies. These much maligned institutions have directly helped to bridge the communication gap between civil servants and business operators. It must, however, be pointed out that this change in attitude occurred in the 1980s in the wake of the structural adjustment programme which compelled policy-makers to think more in terms of efficiency than control. This approach was further encouraged by the business-friendly attitude of the government in 1983.In fact, the single most important measure adopted to kick-start the economy in 1984 was the drastic reduction of the income and corporate tax rates from 65–70 per cent to 35 per cent. This was a powerful signal on the part of government to which the private sector responded positively with the economic results that have led to Mauritius being touted as another miracle.

Key lessons

The World Bank, in a momentary lapse of inspiration, entitled a book *The East Asian Miracle* (the expression Mauritian miracle has also been used in the international press). Miracles in popular belief are attributed to supernatural forces, to a completely exogenous factor. The economic evolution of Mauritius, as described above, has certainly benefited from a fair dose of externalities. The interesting question is why Mauritius is one of the rare ACP countries to have succeeded when all enjoyed the same exogenous factors, viz oil price hikes and a world economic recession in the early 1970s and 1980s, the Sugar Protocol, the Lomé Convention,

absence of quotas on the US market. There is no doubt that Mauritius enjoyed a fair amount of luck – the sugar boom which blurred the impact of the first oil crisis; the EPZ which started at a time when there was not much competition around but plenty of protectionism (why then did others not set up EPZs ?); no major cyclone hit Mauritius in the 1980s when the economy was recovering. But Mauritius was also unlucky when unfavourable weather conditions in 1979 and 1980 hit the first SAP and could have derailed it. In any case, luck comes to those who are prepared, to the practitioner with the gut feelings (or animal spirits in Keynesian terminology) who can identify and seize opportunities.

The key elements in the Mauritian example, then, are endogenous and can be summarised under the following main headings:

◆ *Outward-looking strategy*

The success of Mauritius rests on its adoption of an outward-looking strategy since it became independent. The Export Processing Zone Act was passed in 1970, two years after independence. It should be noted that, unlike EPZs in other countries, the zone in Mauritius did not refer to a specific geographical area. It was a legal entity which provided the holder of an export enterprise certificate with generous incentives: tax holidays, duty free import of raw materials and equipment, free repatriation of capital, flexible labour regulations.

The essential element, however, is not the legislation, but rather the attitude of welcome. Foreign direct investment was actively encouraged, sought out and there was a consensus among the population as a whole that FDI was in the interest of the country. The environment is business friendly, and the people are not at all xenophobic as all have their roots in a foreign land. The cultural diversity has also been a major plus for the tourism industry. Mauritian nationality was even offered to Hong Kong investors when the fate of the colony was still being discussed by the British and the Chinese in preparation for the handing over in 1997. This second surge of investment from Hong Kong was at the basis of the remarkable growth of the textile and clothing sector in the 1980s.

If there is no general consensus on the need to promote export-oriented policies and no involvement of local entrepreneurs, then any outward looking strategy is doomed to failure. An important feature is the presence of local entrepreneurs during the early phases of industrialisation. In Mauritius foreign firms brought in new technology and an element of competition necessary to induce efficient production and enhance quality. But if the EPZ had been grafted on to an economy not yet ready to receive it through lack of infrastructure or unpreparedness of the labour force,

then it would most probably have been rejected by the system. This seems to be borne out by the fact that, while a lot of EPZs have been set up recently all around the world, there has been no rush of investors. The EPZ can only be an instrument of export-oriented industrialisation and is certainly not a panacea. Without the proper enabling environment and the combination of factors highlighted by the Mauritian example, its chances of success are quite limited.

◆ *Governance*

The state played different roles in different phases of industrialisation – initiator, promoter, protector, arbiter. But it was overall a developmental state, i.e. a state committed to the development of the country and not to sectarian interests The rule of law prevails in Mauritius. Political leaders have generally respected the institutions and have ensured that there is social stability. Political vision was demonstrated when Mauritius joined OCAM which opened the door to the Yaoundé Convention and when it stuck to the Sugar Protocol although market prices were higher than the guaranteed price.

The civil service has also played an important role in implementing the various economic and social programmes. Without a proper public administration, without competent cadres in the economic ministries and the Central Bank, it is doubtful whether the adjustment programmes could have been as successful.

The close public-private sector collaboration forms part of good governance as it shows a commitment on the part of political leaders to dialogue and a sense of responsibility on the part of captains of industry to participate constructively in the process of policy-making. There are two meetings a year, chaired by the Prime Minister, where all the economic ministers and their officials are present on the one side, and all the members of the Joint Economic Commission on the other. An agenda is agreed and notes of the meeting are kept. The precondition for such effective dialogue is the existence of a structured private sector. In fact, one of the advantages of a small economy is that proximity makes communications easier, change of policies can be explained faster and turnaround time is shorter.

◆ *Social stability*

An unquantifiable outcome of this collaboration has been the relative social stability that ensued as the fruits of economic growth trickled down to the population at large. Social stability has been, and still is, a major attractive factor for FDI and tourism. This was arguably achieved at the expense of optimal economic policies. But in a multiethnic society the

premium on social peace is always very high.

Care has to be taken, however, not to make temporary concessions which become permanent distortions. Without economic progress and a perceptible continuous improvement in the standard of living, the social fabric can be easily torn asunder. In the final analysis, moreover, only productive employment creation can guarantee social peace in the long run.

◆ *Political stability*

An important factor in the sustained growth of the economy has been political stability – not in terms of the political landscape, which has seen some turbulence (see Annex 1). The stability is rather in terms of a shared belief and adherence to the basic economic strategy of outward orientation, to market-driven development and the rejection of nationalisation and inward-looking policies, and of continuity in broad objectives.

Thus, although a Labour government had already started implementing the policies underlying the SAL in 1980, the accession of a strong, unopposed coalition to power in 1982 ensured that the proper psychological shock was created to sell the idea of austerity to the people. And the fact that the Mouvement Socialiste Mauricien (MMM) had been closely associated with the labour movement made it easier for the government to control trade unions and impress upon the latter the urgency to take strict steps to redress the economic situation. Finally, the MMM, which for years had been clamouring for nationalisation of some sugar estates and for self-reliant development, espoused the existing development strategy and reassured the capitalist class that its objective was no longer social revolution but economic growth, readjustment and tight financial management of the affairs of the country. This change in ideology explains, to a large extent, the fact that Mauritius was one of the rare countries where a SAP did not give rise to street demonstrations and riots. Even though the ruling coalition split and fresh elections were held in 1983, the same steady rigorous economic management continued. Successive governments have helped in creating a business environment that is stable and in managing public opinion with respect to the need for economic discipline.

◆ *Macroeconomic stability*

The importance of an appropriate incentive structure consistent with overall macroeconomic objectives cannot be stressed enough. In spite of the above elements, the Mauritian economy did not really take off before the mid-1980s. The main reason was the failure to get prices right, i.e. the exchange rate, interest rates, tariffs and tax policies have to be geared towards a clear-cut goal – development through the adoption of an outward-looking strategy.

Before the structural adjustment programmes of 1980 and 1982, fiscal policy was characterised by high government expenditure, financed by high taxes and external borrowing (short-term Eurodollar loans were taken to finance long term infrastructure development projects). The fiscal and exchange rate reforms undertaken in the context of the SAP ensured more efficient fiscal governance (the overall budget deficit as a proportion of GDP remained at around 3 per cent between 1985 and 1995), removed the distortions of a dual exchange rate policy and ensured that the rupee was not overvalued.

◆ ***Human resource development***

The design and implementation of a given strategy requires competent cadres and a productive labour force. Another precondition is a literate and adaptable workforce, as well as an efficient administrative system which is development-oriented and not bent on enlarging its bureaucratic precinct. Human capital investment becomes a necessary prerequisite for growth.

Since Mauritius has only its human resources as its major asset, human capital development was considered crucial to any sustainable growth, as well as to an equitable distribution of income. Though the private sector contributed significantly to education, standards were not the same in all secondary schools. Primary education was free and almost entirely public even before independence. Free secondary schooling was only granted in 1976, as a result of Labour's commitment to education as an instrument of social progress. The College of Agriculture, which was set up in 1925, became part of the University of Mauritius at the latter's inception in 1967 and World Bank assistance was sought to develop the education sector further, especially the secondary and vocational sectors. The heavy investment in human capital formation provided the required semi-literate labour force for the initial phase of industrialisation.

◆ ***Adequate infrastructure***

Without investment in basic physical infrastructure (roads, harbour, electricity, telecommunications, etc.) no industrial take-off is possible. Even though mistakes were made in the late 1970s with respect to financial management, particularly in mobilising commercial funds for massive infrastructure development, yet there is no doubt that this facilitated the take-off in the 1980s. Thus, a potential economic doomsday was averted because funds were used for development projects and were not siphoned off. This is another good point for governance – the objectives were right but the economic means were not appropriate. It can be argued that the government did not have much choice as official development assistance

flows were dry and the investment was needed for future growth. There may be a case for revisiting the policies of official development assistance to small economies when they are in a transitory phase.

◆ ***Labour market***

The labour market should function properly so that strife is minimised and wages are allowed to rise in line with productivity. The labour situation will vary from country to country, depending on the political and social structure. Government intervention, in the form of arbitration institutions, may smooth relations between employer and employees and promote a productive work environment. In Mauritius the imperfections in the labour market did not prevent growth from taking place because there was a consensus on the direction and nobody wanted to return to a situation of high unemployment. If there had not been that tacit social contract, the market imperfections could have been a major obstacle.

◆ ***Collaboration with donors***

Compared to many countries, Mauritius has generally well-utilised foreign assistance from donor countries and institutions. This has been possible thanks to the combination of the various factors mentioned above. Still, it is important to highlight the technical assistance provided by UN agencies, the Commonwealth Secretariat and the EU amongst others. Many of the programmes have been implemented successfully because there was concertation in the conception and design. Without the technical assistance (often on a grant basis) it is doubtful whether Mauritius, with its limited human resource base, would have moved so fast. The flexible attitude of foreign institutions has also helped (though we should not forget that it takes two to tango); this attitude has been described by an outside observer as 'the willingness of international interlocutors like the World Bank to backstop with financial assistance a transition involving policy reform, structural adjustment and economic transformation without requiring Mauritius to suffer excessive social and political dislocation'. Mauritius was perhaps lucky to be faced with interlocutors who believed in local ownership of development programmes and not in universal blueprints.

New challenges

Economic success is never definite; economic development is similar to riding a bicycle or, using another simile from the world of sports, it is a 'marathon without a finish line'. Mauritius is a country in transition, an economy at the cross-roads, and the challenge today is to find the right development path to attain the same objectives as in the 1970s, namely

to attract FDI and to diversify its economic base. But the context has changed. The pressures on the economy are both endogenous and exogenous. Internally, the shortage of labour, as well as of skilled manpower, has led to an increase in labour costs. Therefore, the major comparative advantage of Mauritius, on which its early industrialisation was based, no longer obtains as a major pull for foreign direct investment. In fact, it is not so much the costs as the unavailability of manpower itself that has served as a brake. Mauritius has to re-think its industrial strategy and the product it wishes to sell. Externally, the new international scene and rules of the game, with the advent of new low labour-cost garment producers, the WTO and globalisation, and the dispersion of foreign assistance with the opening up of Eastern Europe have created a situation of heightened uncertainty.

It is not surprising that around 1990 the economic indicators started flashing warning signals: EPZ firms started closing down and employment started decreasing in the EPZ (though total employment still was increasing); the unemployment rate has been on an upward trend since 1991 to reach 6 per cent in 1997; the fiscal deficit has surged from an average of 2.2 per cent in the period 1991–93 to 5 per cent in 1994–96; inflation has been kept in check at around 7 per cent but will certainly increase with the introduction of VAT and the sharp depreciation of the rupee during the last two years.

The response of the government in the early 1990s was to push for a strategy of consolidation, modernisation of the textile and agricultural sectors, and diversification into financial services with the setting up of a freeport and offshore business activities. The garment sector is still going through a phase of restructuring but it has consolidated itself through modernisation and increased productivity. The attempts at diversification have not been successful, mainly because of a lack of skills, a mismatch between the output of the education system and the needs of the country and an absence of critical mass. The industrial structure still lacks depth, essentially because the industrial approach has up to now concentrated on building pillars instead of searching for clusters.

The necessary condition for continued growth is a new mindset at the decision-making level (both in the public and private sectors), a mindset that is more geared towards taking risks than to preserve past gains – indeed a new class of entrepreneurs, of innovators, is needed. Hence there are some decisions that will have to be taken urgently in the coming years with respect to the reform of the education and training system, public sector reform, productivity, an integrated economic system, flexible labour market, the development of an export oriented service sector (not

only financial services), a strategy of regional integration (expansion through strategic alliances), as opposed to simple de-localisation. The areas where action will have to be taken are sketched below.

The role of government

Government's role is evolving more towards that of a regulator, an arbitrator and a facilitator. Given the lack of critical mass, it may still have to be a catalyst in some sectors. Nonetheless, the public sector will have to put in place the proper legal and regulatory framework for the private sector to operate. The emphasis will have to be less on control, more on creating a business-friendly environment, less bureaucracy and more efficient delivery of services. The civil service will have to be streamlined and overhauled to acquire this new mindset of facilitator. This is a politically difficult and sensitive issue but one which is fundamental to future growth. It is extremely important that the public service attracts and retains the best brains who can identify potential bottlenecks fast and can take remedial action. There should be a move towards decentralisation. At the same time, a re-engineering of the parastatal sector is required so that efficiency criteria prevail over political expediency. It must be conceded that, in practice, this will amount to a Herculean task as in a small country almost everybody knows somebody and it becomes very difficult to take action for social reasons. This is a challenge to the ingenuity of Mauritian politicians and policy-makers as the social implications are far-reaching.

Human Capital

The reform of the education and training system is underway after almost a decade's delay. The outcome of this reform will be felt only after another decade or so. In the meantime there is need to obtain skilled manpower. Therefore, a policy for the import of highly skilled manpower, of knowledge workers, will have to be elaborated.

Microeconomic reform

Whilst macroeconomic stability is necessary to create the conditions and environment for growth, microeconomic reform has to be addressed once the fundamentals are right. Production is done at the level of the firm and measures must be taken to increase productivity and efficiency. The structural adjustment programme helped to put the Mauritian economy back on course at the expense of optimal economic policies in some cases. Now the time has come to correct certain distortions which, if left unchecked, could jeopardise the competitiveness of Mauritius. The main points on the agenda should be:

Anti-monopoly regulations. A major handicap of being small is the absence of critical mass and the concentration of wealth. This creates a situation where monopolies and cartels develop quite rapidly, and where invisible barriers to entry are erected by the links that exist among players in the manufacturing and financial circles. A thorough reform of the financial sector will be needed. The best prescription for fighting monopolistic behaviour is to open the economy up to global service providers; this will also enable a faster pace of technology transfer and upgrade local skills.

Labour market reforms. The mechanisms for wage fixing, cost of living compensation and salary restructuring must be reviewed to make labour market more flexible and open and to encourage mobility of labour to efficient sectors. These reforms, which could not be carried out in 1982–83 when the unemployment rate was around 17–20 per cent, should now be put in motion.

Social services and the ability to pay. Food and housing subsidies were justified as circulating capital at a time when the majority of the population lived at poverty level. With the increase in standard of living, pockets of poverty can be identified more easily. It makes more sense from both equity and efficiency considerations to provide social services on an ability-to-pay basis and subsidies on a needs basis. This would reduce government expenditure, keep down tax rates and ensure better social justice.

Regional co-operation

Regional co-operation is one of the avenues open to small countries for economic progress. The Lomé Convention is a vivid example. If Mauritius did not have access to a guaranteed market, it would most probably not have fared well in spite of implementing the right policies. Small countries who find themselves in direct competition with labour-rich countries may find it difficult to sustain growth if they cannot depend on secure markets. These markets may be geographically regional. However, if a country finds itself in a crawling growth region (not in ASEAN) then the limits to its own growth will be rapidly reached. Regional co-operation alone will not help small countries, but it is certainly the surest way of expanding their markets – provided there is regional integration. In the case of Mauritius, there is need for a planned de-localisation such that the right strategic decisions taken at the firm level do not lead to de-industrialisation. The last five years have witnessed an increase in the number of firms which have relocated to Madagascar. Many of the foreign-owned enterprises have transferred their production while Mauritian-owned ones have tended to expand in the region, i.e. they have relocated the labour-intensive components. Some 20 per cent of enterprises in the

Malagasy EPZ have Mauritian capital. A similar phenomenon of outward investment has also been noted towards Mozambique where 100,000 hectares of land have been put at the disposal of Mauritius for development. Mauritians have already bought a sugar estate. These new developments in regional co-operation hold much promise for the future – provided that the right framework is put in place.

In conclusion, it can be safely argued that good policies work. But small economies are more vulnerable than big countries as they do not have enough resource endowments (both natural and human) to be able to tide over unexpected calamities and prolonged international recession. If two cyclones like Mitch were to visit Mauritius and the world entered a recession at the same time, it would not be difficult to visualise doomsday. Even mighty Singapore has been badly bruised by the Asian crisis. The international community should, therefore, be aware of the specific disadvantages of small islands and not use per capita income as the sole criterion for judging economic success. Rather, the complexity of the economic structure, its depth and spread, the ability and willingness to implement policies which respond to development needs, the level of foreign exchange reserves, *inter alia*, could be used as more appropriate indicators of success. Above all, small economies like that of Mauritius should not be allowed to be caught in the web of their own success.

Annex 1. Political Parties in Government in Mauritius 1967–98

Year	Parties in Government	Prime Minister
1967(E)	LP/IFB/CAM	Sir Seewoosagur Ramgoolam
1969	LP/PMSD/CAM	Sir Seewoosagur Ramgoolam
1973	LP/CAM	Sir Seewoosagur Ramgoolam
1976 (E)	LP/PMSD/CAM	Sir Seewoosagur Ramgoolam
1982 (E)	MMM/PSM/OPR	Sir Aneerod Jugnauth
1983 (E)	MSM/LP/PMSD/OPR	Sir Aneerod Jugnauth
1987 (E)	MSM/LP/PMSD/OPR	Sir Aneerod Jugnauth
1990	MSM/MMM/OPR	Sir Aneerod Jugnauth
1991	(E)MSM/MMM/OPR	Sir Aneerod Jugnauth
1993	MSM/RMM/OPR	Sir Aneerod Jugnauth
1996 (E)	LP/MMM/OPR	Dr. N. Ramgoolam
1997	LP/OPR	Dr. N. Ramgoolam

(E): Election Year
LP: Labour Party
CAM: Comité d'Action Musulman
PMSD: Parti Mauricien Social Démocrate
MMM: Mouvement Militant Mauricien
PSM: Parti Socialiste Mauricien
MSM: Mouvement Socialiste Mauricien
OPR: Organisation du Peuple Rodriguais
RMM: Renouveau Militant Mauricien

Annex 2. Selected Economic Indicators 1970–1998

	1970	1976	1982	1985	1990	1996	1997	1998
Population (mid-year) (*000*)	829	904	993	1020	1059	1134	1148	1160
National Income								
GDP at current market prices (*Rs mn*)	1192	4704	11725	16618	39275	77187	85892	95750
Per Capita GDP at market prices (*Rs*)	1438	5206	11808	16284	37095	68073	74827	82543
Annual real growth rate (*%*)	-0.2	16.7	5.8	6.9	7.2	6.1	5.3	5.6
Growth rate EPZ (*%*)	—	16.0	-2.9	30.0	7.0	7.0	6.0	6.5
Share in GDP at current factor cost								
Sugar (*%*)	23.0	23.3	16.1	14.3	10.3	7.6	7.2	7.0
EPZ (*%*)	—	2.6	5.0	9.6	12.0	12.0	12.3	12.3
Tourism (*%*)	—	1.8	2.7	2.4	3.2	4.5	4.6	4.6
Savings rate (*%*)	14.0	23.9	15.4	21.6	23.6	23.8	24.2	24.0
Investment rate (*%*)	12.0	27.4	17.9	18.7	30.6	26.1	27.3	23.3
Overall budget balance as a % of GDP	1.6	-4.9	-9.5	-3.5	-1.7	-5.7	-4.6	-3.6
External trade								
Total exports (*Rs mn*)	399	1835	4363	7018	18086	32313	33618	37300
o/w Sugar (*Rs mn*)	341	1322	2462	2867	5212	8347	7495	
EPZ (*Rs mn*)	—	309	1236	3272	11474	21001	23049	25200
o/w textile and clothing (*Rs mn*)	_	203	966	2615	9583	17634	19451	21000
Total imports (*Rs mn*)	420	2408	5048	8119	24019	40893	46093	46500
o/w EPZ (*Rs mn*)	—	280	742	2530	7348	12106	13880	
Visible trade balance (*Rs mn*)	-21	-573	-685	-1101	-5933	-8770	-12475	-9200
Current a/c balance as % of GDP	1.8	-6.1	-3.9	-2.8	-4.5	0.7	-1.5	2.1
Balance of payments (*Rs mn*)	94	-500	-643	258	3442	859	-647	
Debt service ratio (*%*)			22.0	20.0	10.0	9.0	6.9	
Import cover (*weeks*)	38	14	6	6	24	25	24	21

	1970	1976	1982	1985	1990	1996	1997	1998
Inflation rate %	1.5	13.4	11.4	6.7	13.5	6.6	6.6	7.0
Labour								
Total Labour force (Dec)	214.9	284.3	355.0	399.0	433.2	492.8	505.5	
Total employment (*000*)	189.6	260.7	282.0	340.0	421.0	466.0	475.7	
o/w imported labour (*000*)					1.0	8.0	9.0	
Unemployment (*000*)	25.3	23.6	73.0	59.0	12.2	26.8	29.8	
Unemployment rate (*%*)	11.8	8.4	20.6	14.8	2.8	5.5	6.0	
EPZ								
No. of firms (*no.*)	—	85	115	290	568	481	480	485*
o/w textile and clothing (*no.*)	—		65	187	371	267	269	267
Employment (Dec) (*no.*)	—	17171	23476	53951	89906	79793	82083	87057*
o/w textile and clothing (*no.*)	—		20421	48351	80500	69710	73364	76873
Tourism								
Tourist arrivals (*000*)	28	93	118	149	292	487	536	580
Gross tourism earnings (*Rs mn*)	27	184	450	845	3500	9048	10068	11000
Hotel rooms (*no.*)		1881	2204	2630	4,603	6668	6781	

Experiences and Opportunities for Capacity Sharing through Regional Co-operation and Integration: the Case of the Caribbean Community[1]

Byron Blake

Introduction

A major constraint to sustainable development in small states lies in capacity limitations in critical areas such as markets (product and factor), administrative and institutional structures (in public and private sectors), and negotiating power and leverage (vis-à-vis third countries, organisations and private entities). The Commonwealth Secretariat/World Bank Report concludes correctly that smallness of size adds a further dimension to capacity weaknesses in the public and private sectors, a key problem for most developing countries.

Regional co-operation and, in some cases, integration, has been regarded by many small states in relatively close geographic proximity as a basic and indispensable element of development strategy. It provides a means by which such small states can reduce some of the size-related constraints to development, especially in a competitive globalising environment characterised by mega economic blocs and mega corporations.

Most small states in the Caribbean were for centuries parts of shared colonial administrative and production systems. The British colonies attempted to maintain these structures into independence through the establishment of a Federal government. The Federation was short-lived, but recognition of the need for co-operation remained even as they became politically independent entities. The Caribbean Free Trade Area (CARIFTA) which was formed in 1968, and later the Caribbean Community (CARICOM), established structures for co-operation among independent states and economies. CARICOM initially targeted regional co-operation via:

- Economic co-operation through a Common Market for goods;

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

- Functional co-operation and common services in selected areas;
- Foreign policy co-ordination, including joint external economi negotiation.

A central Secretariat, a range of ministerial policy-making bodies and several autonomous specialised institutions were established to oversee and implement co-operative initiatives. Member States, however, maintained sovereignty over all aspects of economic policy except trade policy, as well as responsibility for the implementation of most Community decisions.

The smaller states within the grouping, which coincidentally lay in the geographic centre, simultaneously established an even closer integration arrangement. A primary purpose of this arrangement was to increase the negotiating capacity of the smaller states within CARICOM and to structure and manage a range of common services among them. That integration arrangement – the Organisation of Eastern Caribbean States (OECS) – is recognised as an Associate Institution within the Treaty of Chaguaramas which established the Caribbean Community.

The challenges to development in small states generally in the post 1979–80 period – international economic recession, adjustment in a post-Cold War era and the trends of liberalisation and globalisation – have forced Caribbean Community Members to recognise the need for even deeper and wider regional co-operation and integration; for greater and more systematic involvement of the private sector and of civil society organisations; and for a more pragmatic and pro-active engagement with the wider Caribbean and the international economy and institutions. One aspect of the response has been the decision in 1989 to create a Single Market and Economy.

The legal framework for the CARICOM Single Market and Economy will be fully in place in 2000. The Single Market and Economy will have fundamental implications for national economic policy and management; for engagement with the rest of the world; and for production structures and organisation. It will also challenge the modalities for, and *modus operandi* of, the regional movement, including decision-making and implementation. The operational changes required are currently being developed.

Regional co-operation will not fully offset the cost disadvantages of smallness. Some level of duplication, especially of basic infrastructure, is usually inevitable among non-contiguous small states. The experience, however, is that regional co-operation has significant advantages vis-à-vis a situation where neighbouring small states operate in isolation from each

other. Regionalism has also proven advantageous to private sector and civil society organisations. Experience has also shown that where the international community is consistently and sufficiently supportive, the benefits of regionalism can be significantly expanded.

This paper will focus on:

- co-operation and integration in the Caribbean in the contemporary environment;
- the experience of co-operation and integration in the Caribbean to date;
- experiences of the international community facilitating integration and co-operation in the Caribbean.

It will conclude with some recommendations.

Co-operation and integration in the Caribbean in the contemporary environment

The intensification, liberalisation and globalisation of economic activity; the structuring of mega economic blocs, and the increasing emphasis on competition, have reinforced the internal dynamics for integration in the Caribbean. There is now an urgent need to:

- Enhance the efficiency of resource utilisation, production and marketing;
- Enhance governance, strengthen administrative structures and reduce administrative costs;
- Strengthen negotiating and bargaining capacity;
- Mitigate exogenous shocks and threats;
- Create critical mass in a range of areas.

Enhancing efficiency of resource utilisation, production and marketing

One policy response of the CARICOM Governments to the challenge of enhancing the efficiency of resource use, production and marketing has been to deepen the Common Market into a Single Market and Economy. The primary objective of the Single Market and Economy is to open access to the productive resources of the entire region to producers of goods and services wherever located; to permit the location of businesses

wherever they are determined by investors to be most viable; and to enhance the stability and certainty of the policy environment across the economic space.

The 1973 Treaty of Chaguaramas, which established the Caribbean Community, has been modified in a number of important ways to provide for the Single Market and Economy. Critical changes include:

- a Protocol providing for the right of establishment, the provision of services and the movement of capital;
- a Protocol to strengthen the provisions on trade policy;
- a Protocol to address situations relating to disadvantaged countries, regions and sectors;
- a Protocol to strengthen the disputes settlement arrangements;
- a Protocol providing rules of competition.

In addition to the policy response, there are new institutional arrangements to manage the regional processes and to monitor national economic policies and their outcomes with a view to ensuring that the policy framework of the various economies are converging as is required in a Single Economy. Important here is the creation of a Council for Finance and Planning (COFAP), a Council for Trade and Economic Development (COTED) and a Committee of Governors of Central Banks. The functions of the Ministerial Council for Finance and Planning, for example, include:

- Primary responsibility for economic policy co-ordination and the financial and monetary integration of the Member States;
- Establishing and promoting measures for the co-ordination and convergence of national macroeconomic policies of Member States and for the execution of a harmonised policy on foreign investment;
- Promoting and facilitating the adoption of measures for fiscal and monetary co-operation among Member States;
- Promoting the establishment and integration of capital markets in the Community.

At the more operational level decisions have been made to:

- Facilitate the development of a regional capital market, thereby broadening investment opportunities and providing for businesses to draw financing from across the Region;

- Facilitate the free movement of managerial and skilled personnel and service providers;
- Prioritise human resource development at a regional level.

The pace of determining, negotiating and implementing most of the policy measures has not matched the urgency. For example, while the policy decision to create the Single Market and Economy was taken in 1989, the process of implementation was only being completed in 2000. One cause of this has been resource limitations, especially at the national level. A second explanation is the institutional arrangements. Policy-makers have long recognised the need for institutional change and the West Indian Commission Report in 1992, *Time for Action*, emphasised this. This has led to a Protocol which provides new institutional structures and decision-making arrangements, not only for the Single Market and Economy but for the entire Community arrangement. The new institutional structure is described in Box 1. An analysis of the functions of the Conference of Heads of Government and the four operational Ministerial Councils shows the wide range of areas in which co-operation is ongoing in CARICOM.

The resources to provide the technical capacity to support the new institutional structure have been difficult to mobilise. Further, the arrangements for the sharing of sovereignty which is required for optimal operation of the new structures have not yet been developed.

The Community has placed the issue of enhanced effectiveness on its Agenda at the level of the Conference of Heads of Government. While the specific proposals have not yet been negotiated, at least two elements are increasingly being recognised. First, the number of regional intergovernmental organisations, the need for predictability in their capacity for performance and the financial constraints under which many of the national administrations operate, suggest that an independent source of income to finance those institutions deemed to be critical to the integration process is absolutely necessary. In this regard, it is worth noting that the Heads of Government have already taken the decision that the Caribbean Court of Justice, which is under negotiation, should have assured funding for at least five years, although this will still come from the national budgets. Second, the individual Member States will need to cede, by Treaty, the necessary authority to the regional structures to act on their behalf within agreed parameters.

The private sector is beginning to respond positively to the creation of the Single Market and Economy. There are production and service companies which are now listed on all three active Stock Exchanges in the

Box 1. Institutional arrangements

The Conference

Functions

It is the Supreme Organ of the Community and has the final authority for the conclusion of treaties on behalf of the Community except as otherwise provided in the Treaty.

Membership

Heads of Government of the Member States of the Caribbean Community.

The Community Council

Functions

1. Primary responsibility for the development of Community strategic planning and co-ordination in the areas of economic integration, functional co-operation and external relations.
2. Responsibility for approving the programmes and budget of the Community and for mobilising and allocating resources to the implementation of Community plans and programmes.
3. Responsibility for promoting and monitoring the implementation of Community decisions in Member States.

Membership

Ministers responsible for Community Affairs in Member States of the Community.

Council for Finance and Planning (COFAP)

Functions

1. Primary responsibility for economic policy co-ordination and financial and monetary integration of Member States.
2. Establishes and promotes measures for the co-ordination and convergence of national macroeconomic policies of Member States and for the execution of a harmonised policy on foreign investment.
3. Facilitates the adoption of measures for fiscal and monetary co-operation among Member States, including the establishment of mechanisms for payment.

4. Recommends measures to achieve and maintain fiscal discipline by the Governments of Member States, pending the establishment of a monetary union in the Community.
5. Recommends arrangements for the free convertibility of the currencies of Member States on a reciprocal basis. It also has responsibility to promote the establishment and integration of capital markets in the Community.

Membership
Ministers designated by Member States.

Council for Trade and Economic Development (COTED)

Functions
1. Primary responsibility for the promotion of trade and economic development of the Community. In particular, the COTED is mandated to promote and oversee the operation of the Single Market and Economy, evaluate, promote and establish measures to enhance production, quality control and marketing of industrial and agricultural commodities so as to ensure their international competitiveness.
2. Establish and promote measures to accelerate structural diversification of industrial and agricultural production on a sustainable and regionally-integrated basis; determine and promote measures for the accelerated development and marketing of services.
3. Promote and develop policies to facilitate the transportation of people and goods; promote measures for the development of energy and natural resources on a sustainable basis.
4. Establish and promote measures for the accelerated development of science and technology; develop and promote policies for the protection and preservation of the environment, and for sustainable development; promote and develop co-ordinated policies for the enhancement of external economic and trade relations of the Community.

Membership
Ministers designated by Member States

Council for Foreign and Community Relations (COFCOR)

Functions

1. Primary responsibility for determining relations between the Community and Third States and international organisations, subject to the final authority of the Conference.
2. To promote the development of friendly and mutually beneficial relations among the Member States.
3. To establish measures to co-ordinate the foreign policies of Member States of the Community.
4. To co-ordinate the positions of Member States in inter-governmental organisations in whose activities the Member States participate.

Membership

Ministers responsible for Foreign Affairs of Member States. (Only Member States which have responsibility for their foreign policies or which possess the necessary competence with respect to the particular matter under consideration from time to time may take part in the decisions of the COFCOR.)

Council for Human and Social Development (COHSOD)

Functions

1. Primary responsibility for the promotion of human and social development in the Community.
2. To promote the improvement of health, including the development and organisation of efficient and affordable health services in the Community.
3. To promote the development of education through the efficient organisation of educational and training facilities in the Community, including elementary and vocational training and technical facilities.
4. To promote and develop co-ordinated policies and programmes to improve the living and working conditions of workers and take appropriate measures to facilitate the organisation and development of harmonious labour and industrial relations in the Community.

5. To establish policies and programmes to promote the development of youth and women in the Community with the objective of encouraging and enhancing their participation in social, cultural, political and economic activities.
6. To promote and establish programmes for the development of sports in the Community; promote the development of special programmes supportive of the establishment and maintenance of a healthy human environment in the Community.

Membership
Ministers designated by Member States.

Single Market. There are also regional production and service firms with operations in several of the Member States. Some alliances are also beginning to emerge among private sector firms. The extent of the private sector response, especially in the creation of new ventures, is not yet sufficient to raise either the volume of economic activity or competitiveness to the desired level. This can be attributed to, among other things:

- the novelty of the measures and the extent of the promotion and awareness function;
- the less than full implementation of some of the policies and measures;
- the relatively small size of many of the firms in the Region;
- the weakness of national and regional private sector organisations.

The shortcomings at both the public and private sector levels have been recognised and now need to be addressed.

Enhancing governance, strengthening administration and reducing administrative costs

CARICOM Governments are increasingly being challenged to provide inclusive and transparent governance in order to engender confidence in their small systems, facilitate efficiency in the private sector and, reduce the cost of administration.

CARICOM has developed a Charter of Civil Society. The Charter establishes standards and expectations for all members. As a regional Charter it has not only been accepted by all the governments but, perhaps more

importantly, by civil society in the various countries. There is still, however, a need for wider dissemination of the Charter.

The Community has also reorganised its own structure of governance by, *inter alia*:

- The creation of four Ministerial Councils, the Council for Human and Social Development (COHSOD) and the Council for Foreign and Community Relations (COFCOR), in addition to COTED and COFAP, to manage and give direction to the operational aspects of the integration arrangements;
- The creation of a Community Council comprising Ministers whose responsibilities include the promotion of consultation and co-ordination on regional issues at national level;
- The creation of an Association of Caribbean Community Parliamentarians as a deliberative assembly bringing together national teams of government and opposition representatives to discuss regional issues;
- The creation of a Caribbean Court of Justice which will have exclusive and original jurisdiction in respect of disputes concerning the interpretation and application of the Treaty of Chaguaramas, as well as serving as the final appellate court for the various jurisdictions;
- The creation of a Bureau of the Conference to take decisions on behalf of the Conference between meetings;
- Assigning, by decision of the Conference of Heads of Government, particular Heads of Government with responsibility for the promotion and implementation of agreed areas of the integration process. The positive experience with the earlier assignment of responsibility for external negotiations and for Single Market implementation provided the impetus for the widening of this initiative;
- Mandating, by decision of the Conference of Heads of Government, the Chairman of Conference and the Secretary-General of the Community to brief leaders of opposition parties systematically on the activities of the Community;
- Maintaining the arrangements for consultation among Heads of Government, business, labour and non-governmental organisations.

The Treaty has always provided for co-operation to strengthen administration and reduce cost through joint or shared operation in areas such as foreign representation and customs administration. Such co-operation as has occurred, has tended to be within the context of the national structures, for example, among customs administrations in the Customs

Committee and among the National Bureaux of Standards in the Caribbean Common Market Standards Council. The Community has decided to strengthen the co-ordinated arrangement for standards development and administration and to create a single institution, the Caribbean Regional Organisation for Standards and Quality (CROSQ), which would, among other functions, represent the Member States of the region externally on all standards matters.

Co-operation in the functional and administrative areas has been much more developed at the level of the Organisation of Eastern Caribbean States (OECS) than at the wider CARICOM level. This sub-region operates, among other joint bodies, a single central bank and currency, a common court system, a single directorate of civil aviation and joint diplomatic representation in some foreign capitals.

The CARICOM Heads of Government decided in 1992 that the wider region should identify opportunities for joint representation through the establishment of joint diplomatic missions. No opportunity has yet been identified but this will become increasingly important in centres such as Geneva where international negotiations and policy-making are taking place on a continuous basis.

Strengthening of negotiating and bargaining position

The co-ordination of foreign policies is one of the three original pillars of CARICOM. Among the early successes of the movement were the co-ordinating role it played in forging the African, Caribbean and Pacific (ACP) grouping and in negotiating the first Lomé Convention with the European Union, and in organising the Caribbean and Central American input into the development of the Caribbean Basin Initiative (CBI).

The intensification of international economic relations, and the number of major negotiations in the 1990s, have forced a reassessment of the arrangements for managing such negotiations. The Community's response was firstly the creation of a Prime Ministerial Sub-committee to give policy direction to the process and, later, the establishment of a Regional Negotiating Machinery (RNM) to provide the technical base and to co-ordinate the negotiations. This has been designed to allow for the pooling and complementing of the limited technical resources in the various Member States.

The private sector has also been pooling its resources to deal with the external competitive challenges. This has been most evident in the traditional export areas of bananas (the Caribbean Banana Exporters Association (CBEA)), sugar (the Sugar Association of the Caribbean

(SAC)), rum (the West Indies Rum and Spirits Producers Association (WIRSPA)), rice (The Caribbean Rice Association (CRA)0 and tourism (The Caribbean Hotel Association) (CHA)). Some of the newer areas have begun to recognise the importance of co-operation and organisation. There is, for example, a Caribbean Coalition of Services Industries being promoted by the Caribbean Association of Industry and Commerce (CAIC). Even in traditional areas there is a new spirit of urgency in pooling resources, not only within the specific sectors but also with other sectors.

Mitigating exogenous shocks and threats

One of the relatively new emphases of Caribbean integration is the sustainability of the development effort. Increasingly, Caribbean co-operation must not only address dislocations arising from external economic shocks, but must cope with challenges from natural disasters and from the responsibility for the management of large maritime jurisdictions arising from the United Nations Convention on the Law of the Sea. In this latter regard, the challenges include dealing with the use of the Caribbean Sea by international criminal organisations for the transhipment of drugs; by developed countries for the transport of nuclear materials and waste and by cruise ships for the discharge of wastes; the destruction of coral reefs by local populations and visitors; over-fishing and pollution from coastal settlements, and industrial, agricultural and tourism activities.

The increasing frequency and intensity of shocks from natural phenomena – hurricanes, volcanoes and earthquakes – are forcing a reconsideration of the current arrangements for disaster planning and management. A more comprehensive approach which deals with planning, monitoring, forecasting, prevention, response, rehabilitation and reconstruction is now required.

Already, the Council of the Caribbean Disaster Emergency Response Agency (CDERA) has accepted in principle the concept of Comprehensive Disaster Management. Efforts are also underway to elaborate, for further policy consideration, the institutional arrangements and strategic framework necessary to facilitate this.

Creating critical mass in a range of areas

The need to create critical mass has been one of the underlying rationales of both the public and private sectors for co-operation in the Caribbean. The need for larger markets, high skill requirements, technological complexities and high capital costs have reinforced this need.

One response to the limitations of small market size has been an effort to

broaden the integration arrangement. This has been approached through the widening of membership with the admission of Suriname and Haiti; initiating the creation of the Association of Caribbean States (ACS); negotiating reciprocal or asymmetrically reciprocal trade agreements with the Dominican Republic, Cuba, Colombia and Venezuela; and participation in the negotiations for the Free Trade Area of the Americas (FTAA).

At the level of the public sector, the need for critical mass has been acute in areas such as:

- the provision of tertiary education;
- the undertaking of technical research and analysis;
- the development of the capacity for standardisation and for executing international obligations;
- the establishment of capital market infrastructure;
- the management of the Caribbean Sea;
- the combatting of the dislocations caused by scourges such as HIV/Aids and the use and abuse of illegal drugs and psychotrophic substances;
- national security;
- the strength and independence of legal systems.

The private sector is increasingly being forced to build critical mass in areas such as:

- advocacy and negotiation;
- marketing;
- consultancy and other services;
- financing markets.

Critical mass is even more important where the private sector entities of small states seek to interact with the international private sector. This was vividly demonstrated when the private sector promoters of the Caribbean Investment Fund sought to raise US$50 million from regional and international sources for investment in the CARICOM sub-region. The promoters and regional investors were convinced that the Fund could invest $50 million in the 13 CARICOM Member States. International investors, in particular private investors were not convinced. The promoters had to renegotiate with the Caribbean Community

cost is a critical factor in global competitiveness. This has been a challenge for all CARICOM States, given the small economic size, sparse population and geographic separation (all the CARICOM States were non-contiguous until Suriname, which shares a common border with Guyana, joined the movement in 1995). The CARICOM States have taken several collaborative approaches to addressing the problem of transport and communication.

The Caribbean has had significant experience in the area of disaster management. The multifaceted Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) functioned between 1981 and 1990. The PCDPPP was highly successful, involving 28 countries and working in collaboration with the UN Disaster Relief Co-ordinator (UNDRO), the Pan American Health Organisation (PAHO), and the League of Red Cross and Red Crescent Societies (LRCS). (See Box 3.)

One of the successful areas was collaboration to mitigate the impacts of disasters through the adoption of measures such as a Caribbean Uniform Building Code (CUBIC). The CUBIC was developed by the technical expertise of the Caribbean Council of Engineering Organisations (CCEO) and the University of the West Indies (UWI). It has since been customised for the smaller countries, with assistance from the UNDP and the UN Centre for Human Settlement (UNCHS) in the light of the hurricanes of the 1980s and 1990s.

When the PCDPPP was closed as a result of a shift in strategy and the withdrawal of key international partners, the CARICOM countries established the Caribbean Disaster Emergency Response Agency (CDERA) to continue some of the critical functions. CDERA has emerged as an important institution and has been successful in achieving its objectives. In the absence of other arrangements, CDERA has been forced to undertake some of the elements previously undertaken by PCDPPP. It has had a degree of success but has not really been empowered and provided with sufficient resources to discharge these functions on a continuing basis. As a consequence, CDERA is now in the process of designing a more comprehensive and strategic approach to disaster management for the region. Such a comprehensive programme will require international co-operation.

In the area of human resource development, in particular tertiary level training and scientific research and testing, the co-operation experience has been deep and varied. The most important demonstrations have been in university education through the UWI, which is over 50 years old, and the Caribbean Examinations Council (CXC), which was formed more than 25 years ago. Some information on the UWI is presented in Box 2

governments to permit the option of investing in the wider ACS region in order to persuade international investors that the region was of a sufficient size to permit the operation of a viable investment fund.

The experience of co-operation and integration in the Caribbean

The English-speaking Caribbean has had significant experience over the past 30 years from systematic engagement in a wide range of integration and co-operation processes. This has built on less systematic engagements from the colonial period and, more particularly, from the federal experiment. These experiences have not been confined to governments but have also been features of private sector and civil society operations. Some of the initiatives of the public and private sectors and of civil society organisations have benefited from international co-operation.

In this section, we highlight some of the past experiences, successful and unsuccessful, mainly to point to lessons for current and future action.

Regional co-operation at governmental level

Governments established arrangements for economic co-operation first through CARIFTA in 1968 and the Caribbean Common Market in 1973. The primary objective was to increase both intra- and extraregional exports, especially of manufactured and non-traditional agricultural goods.

This co-operation increased trade significantly in the early stages, admittedly from a small base, and stimulated the growth of a small manufacturing sector, especially in the smaller less developed territories. The rate of growth of trade was not sustained, although intraregional exports now account for over 20 per cent of total regional exports, only led by exports to the USA which account for about 36 per cent.

Initially, intraregional production was expected to be stimulated through joint ventures, mainly organised by governments, to take advantage of different natural resource endowments. Most of the public sector ventures in this area, such as the Caribbean Food Corporation (CFC) were not successful. There were no specific measures or policies to facilitate and stimulate private sector initiatives, either singly or in joint ventures since the CARICOM Enterprise Regime (CER) was never made operational in the various Member States. Accordingly, the stimulation of competitive intraregional production has not been achieved.

The availability of adequate transportation and communication at low

Box 2

Name: **The University of the West Indies (UWI)**

Sponsors/collaborators: Participating governments.

Date of origin: 1948.

Objectives/functions: To actively support the growth and development of West Indian society through training, research and the provision of technical advice.

Membership: Serves 14 countries of the Commonwealth Caribbean. Full campuses in three countries (Mona, Jamaica; St. Augustine, Trinidad and Tobago; Cave Hill, Barbados) with university centres serving the other countries.

Highlights of achievements:

- Cost-effective training of the high quality human resources, and the generation, adaptation and dissemination of knowledge, which the peoples and institutions of the region require to formulate and implement development plans from time to time;
- Delivering expertise and advisory services to Governments and the wider West Indian community;
- Acting as a catalyst to enhance the capability of the Tertiary Learning Institutions (TLI) and generally operating as the hub of the tertiary education system in the region;
- Serving as a bridge joining the region with sources of information, markets, resources and opportunity in the rest of the world;
- Enhancing the standing of the people of the region in international fora by contributing meaningfully to the world stock of knowledge on development issues and to the arts and literature;
- Providing a congenial atmosphere for its on-campus and off-campus students and maintaining a friendly and mutually beneficial relationship with its alumni.

Box 3

Name: **The Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP)**

Sponsors/collaborators: Participating Caribbean governments, external donor governments, namely Canada, Norway, Italy and United Kingdom and international organisations, namely UNDRO, LRCS and PAHO up to 1990.

Date of origin: 1981.

Objectives/functions: To strengthen the individual and

collective capacity of the Member States to reduce the disastrous effects of natural and other hazards so as to contribute to the socio-economic and environmental health of the Caribbean Region.

Membership: 28 countries.

Highlights of achievements:

- Success in the collaboration with other organisations in the finalisation of the Caribbean Uniform Building Code (CUBIC);
- Development of landslide maps and spatial analysis or risk mapping of high-risk areas and the application of land-use zoning techniques to reduce losses;
- Introduction of an effective telecommunications network for alerts regarding possible disasters and to communicate during the emergency period and systems to link countries together. In some instances, radio communications equipment was provided to states/territories;
- Training and research.

and on CXC in Box 4. Co-operation in areas relating to health has been spectacularly successful. This has involved the training of health professionals, research, the development/formulation of policies and the management of health systems. The work of the Caribbean Epidemiology Research Centre (CAREC) is highlighted in Box 5, while the experience of the Caribbean Basic Health Management Project is detailed in Box 6.

Box 4

Name: **The Caribbean Examinations Council (CXC)**

Sponsors/collaborators: Participating Governments as well as donor agencies such as USAID, CIDA, CFTC and ODA.

Date of origin: 1972.

Objectives/functions: To provide a regional secondary level examination pertinent to the needs and circumstances of Member States

Membership: All Member States (except The Bahamas).

Highlights of achievements:

- Certifies in over 35 subject areas currently in the traditional academic, technical, vocational and other areas;
- Contributes to the strengthening/building of National Accreditation bodies through the Accreditation Component of CXC, ACTI/Lomé Funded CAPE Project;
- Sets and marks Common Entrance/11 plus examination papers for some Member States;
- Building capacity in the region in syllabus development, delivery and evaluation;
- Conducts research and develops programmes to help the large body of secondary school students not adequately catered for at the present time.

Box 5

Name: **The Caribbean Epidemiology Centre (CAREC)**

Sponsors/collaborators: Administered by PAHO. Donations from DFID, CIDA, GTZ, FTC, NCI, IDRC, NSL, IBRD, IADB, WRAIR, CDC, Emory School of Public Health & Fogarty International.

Date of origin: 1975.

Objectives/functions: To improve the health of Caribbean people by working with member countries to implement health promotion and disease prevention programmes based on sound epidemiology, laboratory technology and other relevant disciplines.

Box 5 (continued)

Membership: PAHO and 21 members (CARICOM states and Aruba, Bermuda, British Virgin Islands (BVI), Cayman Islands, Netherlands Antilles, Turks and Caicos Islands).

Highlights of achievements:

- Investigation and control of many major outbreaks and emergencies, such as cholera in Belize and Guyana, dengue fever in Jamaica, Barbados and Trinidad and Tobago.
- Surveillance and information sharing through a process of collection, analysis, feedback and use of information for policymaking, planning and evaluation of interventions.
- Training and capacity-building of health professionals and upgrading skills in epidemiology, surveillance, the conduct of surveys, outbreak investigation and in other applied public health disciplines. Distance education strategies are also used.
- Reference and referral laboratory service provided to all members in areas such as virology, immunology and molecular biology.
- Researching and disseminating information on regional health issues.

Projects and Programmes:

- **Expanded Programme on Immunisation** – the Caribbean became the first region in the world to successfully eliminate polio and measles transmission.
- **Special Programme on Sexually Transmitted Infections** – huge success in helping the development of National Policy plans and programmes in the establishment of a Caribbean surveillance system.
- **The Caribbean Tourism, Health and Resource Conservation Project** – this is part of a public-private partnership with the Caribbean Hotel Association (CHA) and its subsidiary company, the Caribbean Alliance for Sustainable Tourism (CAST). The programme aims to improve the quality and competitiveness of the region's tourism industry through improved health and hygiene standards, training, audit systems, surveillance and response to disease problems.

Box 6

Name: **The Basic Health Management Development Project (BHMDP)**

Sponsors/collaborators: USAID/CARICOM.

Date of origin: 1979.

Objectives/functions:

- To assist Member States in the decentralisation of their health care delivery service in accordance with the primary health care concept;
- To upgrade the management skills of health care delivery professionals.

Membership: Nine CARICOM States (Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines).

Highlights of achievements:

- Training of more than 700 personnel in Basic Management; in excess of 500 persons from the Health sector, related ministries, government departments and community-based organisations in Team Building; 250 people in supervisory management; 150 in project design and implementation;
- Technical assistance in the preparation and development of health plans; development of Health Management Information Systems; the establishment of model district health teams for the assessment and analysis of the Ministries of Health; and the development of strategies for the more efficient delivery of health services.

Regional co-operation at the private sector level

The private sector has been involved in co-operation at the regional level, both for the purpose of advocacy and for operations. In the area of advocacy, there is the umbrella organisation, the CAIC, and sectoral associations such as the Caribbean Hotel Association (CHA), Sugar Association of the Caribbean (SAC), Caribbean Banana Exporters Association (CBEA) and the West Indies Rum and Spirits Producers Association (WIRSPA).

These associations represent private sector interests in the appropriate regional forums as well as externally.

At the more operational level, firms have been effecting co-operation through several modalities. Firstly, there has been some co-operation among firms to set up joint marketing and promotional services. Some of these have been sector-wide. Examples are the Caribbean Tourism Organisation (CTO) and the Caribbean Hotel Association (CHA) for tourism; the SAC for sugar; the WIRSPA for rum; and the CBEA for bananas, as well as the Windward Island Banana Development and Export Company (WIBDECO) and Banana Export Company (BECO) for the marketing of Windward Islands and Jamaica bananas, respectively.

Secondly, firms have engaged in joint research and development (R&D) activities to share the developmental costs of new products or varieties.

Thirdly, firms may engage in joint ventures in production to exploit resource complementarities among small states. Hence a firm in a land-rich, thinly populated small state may enter into a joint venture with another firm based in a densely populated small state. Complementarities in human resources and skills may also form the basis of joint ventures.

While operations in joint R&D activities and joint ventures in production should be particularly relevant for the small and medium-sized firms in the Caribbean and there have been expressions of interest, there have not been many examples outside of the traditional areas of sugar and bananas. This is an area in which additional research could be of value.

Fourthly, some firms have engaged in cross-border investments in other CARICOM States. The aim has been to exploit firm-specific competitive advantages (product innovation, technology, management) where the firm concerned has reached a critical threshold in its domestic market. Examples include multi-country investments by Trinidad and Tobago companies such as Neal and Massey, Trinidad and Tobago Cement Ltd. (TCL), CLICO and Republic Bank; investments in Jamaican firms by Guardian Life of Trinidad and Tobago and by Barbados Mutual Life; and Grace Kennedy Company Ltd., CIBC (West Indies Ltd.) and TCL which are listed on all three stock exchanges.

The indigenous commercial banks in the Caribbean have been co-operating systematically since 1974 to develop and strengthen the sector. This is effected through the Caribbean Association of Indigenous Banks (CAIB) which was established in 1974. More information on the CAIB, which has a membership of 33 banks, is in Box 7.

Box 7

Name: **The Caribbean Association of Indigenous Banks**

Sponsors/collaborators: CARICOM Secretariat.

Date of origin: 1974.

Objectives/functions:

- To foster closer relations with indigenous banks across the region;
- To help and develop a vibrant domestic banking environment in the Caribbean Region.

Membership: Indigenous banks in the Caribbean including Anguilla and the Cayman Islands but excluding the Bahamas and Belize:

1. Caribbean Commercial Bank, Anguilla; 2. National Bank of Anguilla; 3. Antigua Commercial Bank; 4. Antigua and Barbuda Investment Bank Limited; 5. Bank of Antigua; 6. Swiss American National Bank, Antigua; 7. Caribbean Commercial Bank, Barbados; 8. The Mutual Bank of the Caribbean, Barbados; 9. Barbados National Bank; 10. Caribbean Conference of Credit Unions; 11. National Bank of Industry and Commerce, Guyana; 12. National Commercial Bank of Dominica; 13. National Bank of Grenada Ltd.; 14. Grenada Co-operative Bank; 15. Guyana Bank for Trade and Industry; 16. Guyana National Co-operative Bank; 17. Demerara Bank Limited, Guyana; 18. Citizens Bank Inc., Guyana; 19. National Commercial Bank Jamaica Ltd.; 20. Union Bank Jamaica; 21. Bank of Montserrat; 22. St. Kitts/Nevis/Anguilla National Bank; 23. The Bank of Nevis; 24. National Commercial Bank of St. Lucia Limited; 25. St. Lucia Co-operative Bank Limited; 26. National Commercial Bank (St. Vincent and the Grenadines); 27. Republic Bank Ltd., Trinidad and Tobago; 28. Royal Bank of Trinidad and Tobago; 29. First Citizens Bank, Trinidad and Tobago; 30. Citibank Trinidad and Tobago; 31. De Surinaamsche Bank N.V, Suriname; 32. Hakrinbank N.V., Suriname.

Highlights of achievements:

- Strengthening correspondent banking relationships;
- Providing training through seminars and workshops;
- Exchanging personnel to assist with particular needs of members especially in the area of auditing;
- Setting up of the Caribbean Credit Card Corporation;
- Collaborating in the joint purchase of shares in LIAT (1974) Ltd.;
- Purchasing of shares in NCB Grenada;
- Creating an independent Secretariat to oversee the affairs of the CAIB.

Civil society

There is now widespread recognition that active involvement of civil society at various levels is an essential part of good governance. However, the role of regional co-operation in strengthening civil society and the ability of civil society organisations (CSOs) to impact policy outcomes have not always been recognised. CSOs in small states are likely to suffer from *'critical mass'* deficiencies in key skills and organisation capabilities and ability to influence policy agendas. Regional co-operation can play a role in the following areas:

- The training of research and technical officers in specialised areas related to international issues and to project management, financial management and organisational management;
- The pooling of resources and exchange of information and experiences on advocacy related to development policy issues;
- Adoption of joint advocacy positions at the regional level to influence the policies of a regional or sub-regional grouping in areas such as external trade negotiations and economic and social policies.

Examples of regional NGOs involved in various areas of co-operation in the Caribbean are the Caribbean Policy Development Centre (CPDC), the Permanent Forum of Civil Society of the Greater Caribbean, the Caribbean Conservation Association (CCA), the Caribbean Council of Churches (CCC), the Caribbean Congress of Labour (CCL), the Caribbean Consumers Association (CCA) (which existed formerly as the Caribbean Consumers League and is now trying to re-establish itself), the Caribbean Credit Union League and the Caribbean Bar Association.

Experiences of the international community facilitating integration and co-operation in the Caribbean

Caribbean regional co-operation efforts, at both governmental and private sector levels, have benefited from international co-operation in a variety of respects. Areas of positive co-operation have included:

At the governmental level:

- Favourable or asymmetrically preferential market access, including provisions for the use of inputs from different countries in the region in the qualifying requirements in trade arrangements such as the Lomé (now Cotonou) Convention, the Caribbean Basin Initiative (CBI), CARIBCAN, CARICOM/Colombia and CARICOM/Venezuela;

- Part IV of the GATT Agreement which has permitted the operation of the Eastern Caribbean Common Market and the Caribbean Common Market, including the differential arrangement in the latter for the Less Developed Countries (LDCs);
- The provision of developmental resources through the Caribbean Development Bank (CDB) which has as specific mandates the support of the regional integration process and the promotion of development in the LDCs. The CDB has not only facilitated the development of basic infrastructure in the LDCs but has reduced much of the tension which would have arisen between the MDCs and the LDCs;
- Support, particularly by the UNDP, CIDA, the EU and USAID, for institutional development and strengthening of several regional organisations, including the Secretariat of the Caribbean Community, the University of the West Indies, the OECS Secretariat and the Caribbean Examinations Council;
- Support, by a multi donor group, for the broad-based PCDPPP.

At the private sector level:

- Support, particularly by USAID, for the institutional strengthening and outreach programmes of the CAIC;
- Support, particularly by the EU and UNDP, for the activities of the Caribbean Export Development Project (Caribbean Export) which focuses on the development and strengthening of the private sector companies;
- Investment by the Inter-American Development Bank (IDB) and the European Investment Bank (EIB) in the new Caribbean Investment Fund (CIF);
- Support, particularly by USAID and CIDA, for the national development foundations and the sub-regional grouping of national development foundations – Eastern Caribbean Organisation of Development Foundations (ECODEF).

There is, however, a need for more consistent international support for regional co-operation. In the past such support has varied not only with donor country/institution capacity but also with shifts in donor policy towards regional co-operation, particularly regional vis-à-vis bilateral assistance. Greater consistency would facilitate long-term planning and implementation and also enhance the credibility of regionalism.

Conclusion

The Caribbean has a network of intergovernmental, private and non-governmental institutions which have demonstrated the possibilities for capacity-building and sharing through regional co-operation and integration. These can be built on in this era of globalisation which simultaneously requires increased capacity and greater efficiency of resource use. The opportunities inherent in regional co-operation for supporting and facilitating the adjustment and repositioning of small states in the global economy can be optimised by the actions of small states themselves and by the international community.

The small states need urgently to support their strategy of regional co-operation through three related sets of actions, namely, reforming and refocusing their co-operative institutions to address the strategic challenges to their effective functioning in the new global economy; giving greater priority to them in the allocation of their limited financial resources and demanding value for money; and endowing the institutions with the authority necessary for effective functioning in an environment in which time is a most important factor. The sharing of sovereignty will require the establishment of systems in which the small states, especially the smallest ones, are satisfied with the checks and balances.

The international community can assist and facilitate the co-operative effort of small states in many ways. Firstly, the international community needs to give policy recognition to regional co-operation as a legitimate and important part of the strategy for the development and global repositioning of small states. It should not be merely a means of reducing the administrative costs of international institutions in their relationship with small states, but a long-term commitment to the small states among their membership.

Secondly, the international community will need to modify its approach to co-operation with, and providing assistance to, small states by:

- greater preparedness to involve small states and their institutions in the design stage of programmes;
- greater willingness to use and strengthen national and regional institutions and experts as a means of building capacity;
- supporting technical co-operation among small states, including private sector and non-governmental organisations;
- a greater willingness to co-operate, as a group, in assisting small states to deal co-operatively with major challenges and issues which are not country-specific, such as natural disasters.

Thirdly, the design of international agreements must continue to recognise the importance of special and differential treatment for small states and, where appropriate, should provide for small states to discharge some of their obligations, especially technical requirements through regional co-operation and regional mechanisms.

Fourthly, the international community could and should provide facilities which can be used on a co-operative basis by small states in key capitals where major international organisations are located. The facility provided by the Commonwealth for small states in New York provides an example in this regard.

Fifthly, the international community should provide greater support for regional institutional structures in the public, private and non-governmental sectors. In this regard, the placement of experts in, or the execution of programmes through, regional organisations, in particular technological and training institutions, would assist in building and strengthening permanent capacity.

Sixthly, the international community will need to modify its attitude to the support for the private sector and private sector institutions in small states. The building of institutions which directly support private sector development and operation is critical. The small private sector operations and institutions need support to begin to compete. Support does not put them at any advantage vis-à-vis large firms in developed countries which, in any event, benefit from the institutional and informational capacities of their governments.

Finally, the international community needs to build in predictability and consistency in its support for small states, especially for the private sector within small states.

Sharing Capacity: the Pacific Experience with Regional Co-operation and Integration[1]

South Pacific Forum Secretariat

Introduction

The 14 Forum Island Countries[2] (FICs) consist of thousands of islands, comprising 53,000 square kilometres of land, and support a combined population of 6.4 million. These countries are diverse with their own cultures, languages and systems of government. The largest member country is Papua New Guinea, with its rugged mountains and 700 dialects, while the smallest is Nuie, a single upraised coral atoll and home to around 2000 people. FICs are also developing economically at different rates and with different foci.

However, despite these seemingly great differences, members have found sharing their capacity through regional co-operation to be a positive way of overcoming the common problems of small size and geographic isolation. This paper examines the experience of the Pacific region with regard to co-operation and integration.

Regional organisations and co-operation

Individually, the island economies of the Pacific face limits in their access to the skills, information and finance needed for successful global integration and economic growth. Even the largest have some weaknesses. As a result, the interests of such countries are overwhelmed by large and powerful nations who can dictate the evolution of world trade, finance and other economic relationships.

Regional institutions and organisations are able to overcome such shortcomings by pooling human resources and attracting and retaining highly

[1]This paper was presented at the Commonwealth Secretariat/World Bank Joint Task Force on Small States conference held in London in February 2000.

[2]The 14 island members of the South Pacific Forum are: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Additionally, Australia and New Zealand are members of the South Pacific Forum.

Box 1. Regional Organisations in the South Pacific

The **South Pacific Forum**, the annual gathering of Leaders from sixteen independent and self governing nations in the region, has a key role not only in the stability and political cohesion of the Pacific region but also in articulating the region's concern on major issues that are on the international agenda. Its secretariat (Forum Secretariat) executes the requirements of the Heads of Government expressed at the annual meetings. The Forum Secretariat facilitates, develops and maintains co-operation and consultation between and among its members on issues such as trade, economic development, transport, energy, telecommunications and other related matters. It also seeks to support its members in pursuing their objectives through multilateral fora.

The **Secretariat of the Pacific Community (SPC)**, under its non-political mandate, provides advisory, consultative and training services to governments on scientific, economic, social, environmental, health, agricultural, rural development, community health, education, demographic and cultural matters.

The **Forum Fisheries Agency (FFA)** serves as the Forum Fisheries Convention's Secretariat. FFA's objective is to assist members with sustainable development and management of their fisheries and related activities. This includes policy assessments and representation at international fisheries meetings. FFA's membership differs from SPC's in that it has no distant water fishing nations as members.

The **South Pacific Applied Geoscience Commission's (SOPAC)** overall mandate is to assist its members in assessment, exploration and development of their nearshore and offshore mineral and other marine non-living resource potential. SOPAC has regional responsibility for the water and sanitation sector; it co-ordinates with SPC on health-related issues and SPREP on pollution issues.

The **University of the South Pacific (USP)** is governed by the University Council comprising representatives from its 12 member countries. USP provides tertiary education and undertakes scholarly and applied research and is closely involved in educational matters with the Pacific Island governments, in most of whose countries it has a branch.

Box 1 (continued)

The **Tourism Council of the South Pacific (TCSP)** is jointly owned by its 12 member countries. Its role is to work with national tourist offices, international airlines and tour operators to increase visitor arrivals in the region, to market and promote tourism and to help the private sector enhance the quality of their products and services through a variety of programmes on training, tourism awareness and preservation of the environment.

The **Pacific Islands Development Programme (PIDP)**, at the East-West Center, Hawaii, helps meet the special development needs of the Pacific Islands through co-operative research, education, and training. A major objective of the Programme has been to provide quality in-depth analytical studies on specific priority issues as identified by the Pacific Island leaders and people. The studies aim to provide leaders with detailed information and alternative strategies on policy decisions.

The **South Pacific Regional Environment Programme (SPREP)** is the regional technical and co-ordinating body responsible for environmental matters in the Pacific region. Its mission is to 'promote co-operation in the South Pacific region and to provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations'.

skilled personnel. Their operations provide economies of scale, allow for the sharing of technology and knowledge and also provide administrative savings, in comparison to non-co-operative behaviour. Working together, the nations of the Pacific can have a more persuasive voice on the world stage and can help secure a more favourable international climate for the external economic and political relationships of the South Pacific.

Effective regional co-operation requires organisational structures. Co-operation in the Pacific region takes place through many different organisations, each with specific functions. These are outlined in Box 1. In line with the differing policy interests and needs of Pacific countries, membership of each organisation varies. Annex 1 outlines the major regional organisations and the membership of Forum countries in these.

Membership of these organisations provides several benefits. At the most basic level their meetings provide an opportunity to share experiences and discuss problems in the areas of interest. This allows countries to make informed decisions and saves each country having to 'reinvent the wheel'. In many areas of regional co-operation economies of scale are created leading to efficiency gains. Despite the geographic spread of the region, many of the issues of concern to member countries are external, such as shipping and aviation issues, and a co-operative approach is needed if these are to be effectively addressed. On the international stage the existence and effective operation of the regional organisations are a demonstration of regional solidarity and increase the negotiating power of these small countries.

The activities of the organisations outlined above are co-ordinated by the Council of Regional Organisations of the Pacific (CROP) which has established working groups covering the marine sector, land resources sector (agriculture, forestry and mining), health and population, trade and the private sector, and information. The Secretary-General of the Forum Secretariat chairs CROP. With the existence of so many regional organisations, each with different memberships, CROP ensures that the work of these organisations does not become duplicative. The regional strategy is designed to aid this.

The Regional Strategy

Background

The formulation of the CROP Regional Strategy was initiated in response to a call by Pacific island leaders for a more meaningful role in setting regional development priorities and programmes. It recognises the need to improve the utilisation of limited regional resources and enhance the delivery and impact of regional development initiatives. A co-ordinated regional approach, it was considered, would also address issues of wasteful duplication and overlaps in regional programmes and among regional organisations.

The 1995 Forum endorsed the Regional Strategy. The Regional Strategy is a dynamic process and is designed to be continuously updated to accommodate changing circumstances and needs of the region. Since its initial endorsement, the Regional Strategy has been discussed extensively and adopted at various fora, including by all CROP agencies, Regional Planners' meetings, Forum Economic Ministers' meetings and with donors and donor implementing agencies through the PIC/Partners and the Post Forum Dialogue.

The Regional Strategy

The Regional Strategy seeks to empower island countries to determine their own priorities and programmes and to secure donor support for more strategic interventions and a more systematic approach to the use of their resources. The key objective of the Regional Strategy is to improve the effectiveness of regional assistance by ensuring that the targeted priorities reflect genuine, critical needs which can be more cost-effectively met through joint regional use of resources.

There are a number of advantages in following a regional approach:

- Economies of scale are created leading to efficiency;
- Human and financial resources can be shared or pooled;
- Regional programmes can be more effective through joint action;
- External factors and constraints can be addressed;
- Shortfalls in the scope of domestic or bilateral interventions are supplemented;
- Regional solidarity is demonstrated;
- It becomes possible to trial activities before large commitments are made under national programmes.

However, for the Regional Strategy to be successful it is crucial that its development goals are reflected in national priorities, and that regional strategies are linked to, or complemented by, national programmes.

The formulation of the Regional Strategy is summarised in Annex 2. This identifies the main development challenge faced by the region as a 'deterioration in living conditions caused by economic stagnation preventing opportunities for improvement in quality of life of peoples of the Pacific Islands'. It also identifies four levels of factors (development constraints) contributing to the problem:

- The lack of an enabling environment, which includes the lack of a policy environment conducive to development and an inadequate skills base;
- Economic infrastructure constraints, which include high transportation costs, inadequate communications and information systems, and dependence on high cost energy sources;
- Production sector constraints, which include low productivity in land resource sectors, low returns from marine resources and inadequate private sector development;

- Social infrastructure and environment constraints, which include declining health, unsustainable fresh water supplies and environmental degradation.

Annex 3 identifies the main overall development goal for the region as 'sustainable economic growth leading to improvements in the quality of life for peoples of the Pacific Islands'. This represents the positive formulation of the development problem. Key strategies for achieving the development goal are again organised at four levels corresponding to the four levels of constraints in the diagram forming Annex 2:

- Enabling environment strategies, including strategies for economic and government reforms and for civil society participation, as well as strategies for improving education and training;
- Economic infrastructure strategies, including strategies for improving access to, and the efficiency and cost structures of, transport and communications and energy;
- Production sector strategies, including strategies for improving access to, and sustainable productivity of and returns from, land and marine resources, the private sector, trade and tourism;
- Social infrastructure and environmental strategies, including strategies for improving health, water supplies and sanitation.

Pacific Islands Free Trade Agreement

The Pacific Regional Free Trade Agreement (PARTA) is one of the potentially most significant undertakings in regional co-operation between Forum island countries.

Background

The October 1999 Forum Leaders meeting in Koror, Palau, endorsed the PARTA between Forum Island countries. Initially the focus will be on Forum Island countries, and the PARTA will be implemented in stages over a period up to 2009 for developing Forum Island countries and 2011 for the Smaller Island States and Least Developed Countries. Over the next two years negotiation towards finalising a framework agreement will be undertaken.

The PARTA concept was put forward to the Forum Leaders from the 1999 Trade Ministerial, but the current proposal took shape and was developed at the Forum Economic Ministers' Meetings of 1997 and 1998.

The concept of a free trade area amongst FICs has a much longer history.

It dates back to first South Pacific Forum meeting in 1971 when the seven founding members discussed the possibility of an economic union. This desire was reiterated in the original 1973 agreements setting up its administrative arm (now the South Pacific Forum Secretariat) which included an obligation to consider the creation of a free trade area. Over the next two decades the Melanesian Spearhead Group (MSG) countries undertook pioneering work through the MSG Trade Agreement and Bilateral Agreements. More recently, the PARTA concept was recognised in the Forum Agreement of 1991.

Perceived benefits

A PARTA offers theoretical advantages in overcoming the fundamental constraint to the development of the FICs – their small size. Size is a disadvantage both relative to potential competitors, as well as in terms of increasing FIC vulnerability to economic shocks due to natural disasters or price changes for key exports.

The PARTA expands the size of the 'home' market through giving preference to other FICs and results in greater economic integration of FICs. Although only an estimated 4 per cent of total regional trade is intra-FIC trade, real economic advantages should result once integration is deepened to include labour and capital markets. Additionally a PARTA creates more potential for business people and so encourages intra-FIC trade and business growth, which in turn reduces the vulnerability of FICs to external shocks.

The increase in market size and boosting of growth potential is vital considering the rapid and fundamental changes in the global aid and trade regimes. These are reflected in the decline in real value of aid, the loss of trade preferences, and in pressure from the World Trade Organisation and external trade partners for trade liberalisation. A PARTA will give a stronger foundation for responding to globalisation and universal trade liberalisation.

While the creation of a PARTA is not absolutely necessary to assure WTO compatibility of the Lomé trade preferences, this will nonetheless greatly facilitate the development of a reciprocal trade agreement or regional economic partnership arrangements between the relevant Pacific countries and the EU.

Finally, the PARTA is a strong political message that can help arrest the political and economic marginalisation of FICs. The more the region acts as a group, the more political influence it will have. In a world that is dividing into regional entities, trying to deal alone with other regional

trading and economic entities, such as the European Union or the North American Free Trade Area Countries, makes no sense. It is better for FICs to deal with them as a group. A regional trade agreement will be important both economically and politically.

Outline of structure of proposal

The major points in the proposed PARTA are:

- Coverage is to initially include only goods, with a negative list of goods that are highly sensitive. This list would be phased out over time;
- There will be a phasing out of tariffs in fixed steps over 8 years for FICs and possibly 10 years for small island states (SIS). There is the possibility of several special and differential treatment provisions for SIS in several areas;
- Rules of Origin are to be based upon Change in Tariff Heading in conformity with WTO/World Customs Organisation rules;
- Safety Provisions, Anti-dumping and Balance of Payments safety provisions will be in conformity with existing WTO rules;
- Infant industry provisions will permit members to withdraw concessions following consultations in order to develop new industries;
- A protocol with Australia and New Zealand includes a timetable for liberalisation that is to be negotiated when FICs feel this to be appropriate;
- There is commitment to future consideration of widening the arrangement to include United States' and French territories;
- There are also commitments to future consideration of deepening of the relationship through the phased liberalisation of services;
- A trade facilitation protocol requires members to co-operate in the areas of customs, quarantine and standards conformance;

Current status

It is planned that the PARTA will be gradually implemented from 2001. Prior to this Forum, trade officials have been tasked to negotiate the details of the draft agreement, including negative lists (that is a listing of industries which will be negatively affected and so may be in need of transitional protection) and measures to apply the Agreement to Australia and New Zealand.

A proposed draft agreement will be ready for the consideration of Trade Ministers and subsequently by Forum Leaders at the 2000 Forum meeting.

Implementation process and domestic policy consequences

The implementation of the PARTA, which is likely to occur in stages over the period up to 2009 for FICs and 2011 for SIS and less developed countries, allows time for adjustment by both government and business to the new trade regime. Although, over time, the MSG agreement and the various bilateral treaties between Forum Island countries will be superseded by a more inclusive regional trade agreement, in this adjustment period their role will remain crucial.

The adjustment to a FIC PARTA is expected to be small, predominantly because of the relatively small proportion of FIC trade that is intra-FIC. With a limited range of unprocessed exports the administrative burden that will be put on SIS and smaller FICs will be relatively limited and can be handled within current capacities, with some occasional technical assistance. A preparatory study by the University of Auckland shows that a FIC-only PARTA will have only minor tax implications for most FICs.

Both the University of Auckland study and another preparatory study by Stoeckel have shown that a FIC-wide liberalisation is not a substitute for broader liberalisation. Naturally increased liberalisation carries with it greater net benefits, but also greater transitional costs. The inclusion of Australia and New Zealand in the PARTA will cause greater adjustments. The administration of rules of origin will become more difficult as intra-FIC trade becomes more complex. As liberalisation progresses, members will have to move towards more trade neutral taxes such as value added taxes, instead of a reliance on import tariff revenue.

Parallel developments

Parallel developments in terms of trade facilitation, quarantine, product standards and customs procedures are indicative of the Free Trade Agreement not being regarded as an endpoint. Indeed addressing these issues may be more important than the PARTA itself.

The 1998 Forum Economic Ministers Meeting (FEMM) agreed to continue to pursue trade liberalisation and facilitation objectives. Measures and strategies that were identified included furtherance of work on collective trade facilitation measures in plant quarantine, animal health, standards and conformance, customs procedures, shipping services arrangements and government procurement. At the recent Forum Trade

Ministerial Meeting, Ministers agreed to recommend to the Forum that further work be undertaken on studies of trade facilitation measures. This was later endorsed by our Leaders at the recent Forum Leaders Meeting in Palau.

The Forum Secretariat is therefore conducting two studies entitled *Trade Facilitation Capacities of Quarantine and Customs Services in the FIC Region* and *Trade Facilitation Capacities of Standards Conformance Services in the FIC Region*. Both studies are expected to be carried out early 2000 with the final draft is to be presented to Trade Ministers at the Forum Ministerial Meeting later in the year.

With regard to Customs, the United Nations Conference on Trade and Development (UNCTAD), with funding assistance from Australia, has commenced the introduction of the automated system of customs data management, known as ASYCUDA, in Fiji, Vanuatu and Samoa. New legislation has been introduced in Fiji and Samoa for facilitating the electronic processing of customs documents. The Forum Secretariat has also been liaising with the EU for funds to introduce ASYCUDA to a further five PICs (Papua New Guinea, Kiribati, Tuvalu, Solomon Islands and Tonga).

On Quarantine issues, a two year work programme for the Pacific Plant Protection Organisation which was launched in 1998 is currently progressing at a reasonable pace.

Prospective developments

There are several further developments in prospect. However, Forum members want first todecide to proceed with their own regional integration, at their own pace, and only then consider integration with trading partners when they are ready.

The South Pacific Forum Secretariat is undertaking further studies on the effects of possibly extending the PARTA to French and United States' Pacific island territories; the effects of extending the agreement to services trade; longer-term integration of the PARTA into the Closer Economic Relations agreement between Australia and New Zealand; studies on market access issues between Forum island countries and the USA and Japan; on social impacts of the free trade agreement; and on trade facilitation measures.

To be most efficient a free trade area should not be seen as a one-off measure but as part of a process of regional economic integration. Closer cooperation between Forum Island countries on a number of issues could eventually lead to the development of a Customs Union. Therefore a

long-term visionary approach to the future of the region is required in developing this approach.

Development assistance co-ordination

Forum Island countries receive considerable levels of development assistance each year from a number of bilateral and multilateral donors. Forum island countries appreciate that donor partners have an integral role in their development. The best way of ensuring the sustainability of development efforts is to ensure that the donor-recipient relationship is a genuine partnership, with recipients and donors together taking ownership and exercising it in a responsible and accountable manner. To promote this an annual meeting of Pacific Island Countries (PICs) and their development partners is organised by the Forum Secretariat. At this meeting PICs and donors share experiences on what works, what does not work and why. The aim is an improved understanding of how best to enhance the way the region engages in development co-operation.

The Post-Forum Dialogue remains the key mechanism for promoting regional concerns with interested extra-regional states. This unique process includes Canada, People's Republic of China, EU, France, Japan, Republic of Korea, Malaysia, the Philippines, the UK and the USA. The Dialogue comprises Ministerial level meetings with each Partner to discuss wide-ranging issues, including political, economic and trade and investment issues. The successful Dialogue meetings in Palau last year, following the Forum Leaders meeting, again demonstrated the value of this process in providing a venue for high level discussion of developmental and international issues of importance to the region.

On a regional basis, there are two development programmes in which the Forum Secretariat has a strong involvement:

- EU-funded staff are located at the Forum Secretariat to manage the EU regional programme. The programme encompasses a diverse range of activities, including cyclone warning systems, civil air communications, and waste awareness and education. Most of these activities are actually implemented by other regional organisations. For example, SPREP is playing an important role in the waste project.
- The Canada-South Pacific Ocean Development Programme, or C-SPOD, is Canada's major regional commitment to the South Pacific. It reflects the Canadian and South Pacific viewpoint that ocean development is a key priority. The programme provides funding for projects developed by its four partner regional organisations (Forum Secretariat, FFA, SPREP and USP).

The Forum Secretariat also plays a role in co-ordinating requests for assistance from the region to donors. This assists both sides by simplifying the task for donors and ensuring that all member countries know of available assistance and are able to prepare a request for such assistance. For example, Taiwan donates considerable funds to support regional organisations and the Forum Secretariat co-ordinates the submission of these requests to Taiwan.

Sectoral policy co-ordination

In addition to the co-ordination role played by regional organisations, there is also co-ordination within the region on the basis of sectoral issues. There are strong economic advantages in sectoral co-operation. Depending on the sectoral intervention, significant economies of scale may be achieved by acting on a regional basis. It may be more efficient to co-operate to negotiate international agreements which address common sectoral issues. Finally, national sectoral policies can be more effectively developed and more widely supported through regional co-operation.

This paper now presents information on co-operative activities between South Pacific Forum members across a range of sectors.

Aviation

Early attempts at co-operation in the aviation sector centred on establishing a commercial venture. Air Pacific was created in 1972 when Fiji Airways (which had been in existence in various guises since 1947) changed its name to reflect its growing role as a regional carrier. Air Pacific promotes itself as 'Fiji's international airline' and so has been less successful as an entity owned by the region than its shipping equivalent, Pacific Forum Line. Air Pacific's current major shareholders are the Fiji Government (51 per cent) and Qantas (46 per cent).

In contrast, more recent aviation sector co-operation has been focused on improving policy settings and creating an environment that enables the development of this sector.

Pacific Aviation Safety Oversight (PASO)

The mandate arising from the Forum Civil Aviation Action Plan 1999 includes the establishment of a collaborative regional aviation safety oversight programme.

There has been a long recognised concern with the implementation of Contracting State's obligations for safety surveillance under the Chicago

Convention on International Civil Aviation (1944) across the PICs. Surveillance obligations apply to the airworthiness of aircraft, operator and aircrew certification, flight and airport/airway operations. While the responsibility for ensuring compliance with standards rests with the state in which an aircraft or operator is registered, provision is available for a transfer of compliance activity to an outside agency. In very few instances do PICs have adequate staff or expertise to fulfil their obligations. Many island countries currently rely on surveillance services provided by staff from more developed countries. Some services are procured at cost while others are provided as part of aid programmes which have a generally uncertain future.

The idea of a co-operative sub-regional approach to surveillance was first proposed by the International Civil Aviation Office (ICAO) at the Thirty-first Directors General of Civil Aviation Conference held in Suva in August 1995. The Co-operative Development of Operational Safety and Continuing Airworthiness in the South Pacific (COSCAP) proposal was subsequently considered at meetings between states in 1995 and 1997. In 1999 an alternative proposal was put to Ministers for a Pacific Aviation Regional Safety Office. However, Ministers requested further information in a number of areas. Recent progress with a COSCAP-type approach in South Asia demonstrates that regional co-operation can work in the area of aviation safety.

The benefits of regional safety oversight co-operation are many:

- Compatibility of safety-related aviation rules amongst participating States;
- It can provide a basis, in the long term, for ongoing provision of regional aviation support services, which may be broadened to include other aviation services;
- It can assist states to meet ICAO standards and recommended practices contained in Annex 17 of the Convention on International Civil Aviation;
- Better collaboration among aviation security agencies in the region, and between them and other law enforcement agencies through the Forum Regional Security Committee;
- Compatibility of aviation rules among participating states, and the authorisation of the proposed regional aviation safety regulation and oversight programme to provide technical assistance in the regulatory development process.

PASO is being implemented through a Steering Committee of Heads of

Forum aviation agencies to enable them to assume responsibilities and ownership of the programme. Members of the Steering Committee met in Nadi in January 2000. They determined to set up a small 'Options Group' to provide an analysis of a range of detailed options to put to Ministers at their September 2000 meeting. This Group will compare ICAO's modified COSCAP proposal and two variations of the PASO proposal.

While Pacific representatives have been, in general, supportive of a co-operative proposal, it has not yet materialised due to an inability of states to finance the start-up cost, although some indications of aircraft and airline company support have recently been given. The lack of clarity in how such an organisation would operate, and be sustainable, has also hindered progress. The Options Group will be working to overcome such deficiencies in past proposals put to Ministers.

Pacific Unified Upper Airspace Management Arrangement (PUMA)

The Pacific Unified Upper Airspace Management Arrangement, as directed by Forum Aviation Ministers in May 1998, is a proposal whereby, through regional co-operation, safe air navigation services are provided in the most efficient manner for both airspace users and Forum Island Countries.

Following the 1998 Ministerial, an Interim Management Committee for Unified Airspace Management Arrangement was formalised in Sydney, in September 1998. The Committee accepted International Air Transport Association's (IATA) offer to provide consulting services to prepare a Concept Study on the management of airspace in the region.

The recommended option identified in the study proposed that Forum members enter into a multinational agreement under which states agree to incorporate an operating company or corporation in a member state and to operate on a profit or non-profit basis. It was also proposed that the capital structure should help users, as well as states, to participate as shareholders or members. The findings of this study were put to Aviation Ministers at their 1999 meeting. Ministers requested further clarification and study in a number of areas. A Working Group was set up to complete these tasks.

At the first meeting of the Working Group, ICAO was requested to prepare a proposal for a study of upper airspace management which took into account the Ministers' decisions. This included factors such as rigorous country-level cost-benefit analyses and the consideration of options such as a multilateral agreement to achieve co-operative upper airspace management.

At the second meeting of the Working Group in January 2000, it was agreed to go forward with the ICAO proposal for a study, *Co-operative Management of Airspace – Pacific Island States*. This study will put a detailed option to the Working Group for consideration, prior to the 2000 Ministers meeting.

Pacific Islands Multilateral Air Services Agreement (PIMASA)

The prospective liberalisation of air transport services and the creation of a single aviation market in the region is being examined in a co-operative project, Pacific Islands Multilateral Air Services Agreement (PIMASA).

In May 1998 Forum Ministers for Civil Aviation acknowledged that the current structure of bilateral air service agreements were a key factor in determining the efficiency of air services in the region. They agreed that changes in this traditional approach were necessary if increased efficiency was to be achieved. Ministers agreed to adopt a framework for the aviation sector that reflected the Forum Leaders' stance on economic reform objectives as set out in the Forum Economic Action Plan. As a result a Review of Air Service Agreements in the Forum Island Countries was carried out in 1998–99.

At the 1999 Ministerial meeting, in reviewing the work carried out so far, the Ministers recalled that they had agreed in 1998 to use the bilateral system to introduce more flexibility in the sector. However, the review of the current operational environment revealed that most FIC bilateral arrangements did not reflect recent international aviation trends and that intraregional agreements were unduly restrictive. FIC arrangements with countries outside the Forum did not generally provide airlines with the flexibility that would enable them to better serve and expand their markets.

The Ministers agreed that there was a pressing need to facilitate air services on the east-west axis of the region in order to encourage multi-destination tourism. It was also noted that the development of an internal market may help FIC airlines become more competitive with outside airlines and encourage greater efficiencies.

However, given the realities of the region and the concern from some island carriers regarding their ability to sustain services, the Ministers agreed that a gradual approach to liberalisation was needed. This could involve liberalisation of some market segments (such as freight), particular aviation freedom rights and spreading the adjustment over a number of years. Ministers recognised the need to address the concerns of member states in areas such as competition/dispute resolution and safeguard measures, and the ownership and control of airlines operating within a FIC single aviation market.

The meeting agreed that drafting a FIC multilateral agreement be undertaken under the auspices of the Forum Secretariat so that member countries can fully consider its implications. This will allow members to consider the contents of such a agreement and how it would address their concerns before making any final decision on whether to proceed. The Centre for Asia Pacific Aviation has been contracted to undertake drafting a prospective agreement for Ministers to consider in late 2000.

Shipping

Pacific Forum Line (PFL)

One of the earliest acts of regional co-operation was the establishment of the PFL in 1977. It is owned in various proportions by 12 shareholder governments of the 16 members of the South Pacific Forum. The establishment of a regional shipping service was recognised as necessary as the move to containerisation outside the region was impacting negatively on the services being offered by tramp operators and international trade required a reliable shipping service.

Generally FICs face several challenges in regard to receiving adequate shipping services. The FICs are small and scattered markets which results in low-volume cargo being shipped over long distances. There are also heavy imbalances in the volume and composition of imports relative to exports. These factors combined could, in principle, result in high shipping costs and rates, few and erratic shipping services, and inefficient operation due to the lack of competitive pressures on service providers. Failure to address these problems in shipping services was recognised as a hindrance to international competitiveness, trade expansion and economic development in the region.

The PFL is a successful example of regional co-operation and is acknowledged as an instrument for regional development. Specifically, the PFL is charged with ensuring regular, modern and viable shipping services to encourage the economic development of the South Pacific Region and to contain freight rates. The benefit to FICs is that trade between the islands and trading partners is not stifled by high transport costs.

In its early history PFL was beset by successive losses due to factors such as under-capitalisation, the high cost of leasing containers and high world charter rates. These implementation issues were overcome by subsequent recapitalisation to realistic levels which salvaged the company by allowing it to purchase container equipment, renegotiate charters and leases and, eventually, become ship owners. Rationalisation of services and Agency Agreements was successfully accomplished and by the financial

year 1985, PFL was able to declare a maiden profit. Since then PFL has maintained a trend of profitable operations.

By 1995 the market had changed substantially on the main routes, with many shipping companies operating in a state of almost perfect competition, resulting in low freight rates. This is advantageous to exporters and importers and benefits the national economies of some countries, although return on equity in PFL has been reduced. PFL does not serve all FICs, not even all shareholding countries. Expected to make a profit, the line had to terminate a non-economic feeder service to Tuvalu and Kiribati in 1993 when foreign aid and subsidies were withdrawn.

Nevertheless, Forsyth and Sisto (1999) reported that the actual shipping service situation in the region – routing, frequency, and regularity – reveals that shipping services within the FIC Region, and linking the FICs to the rest of the world, is now generally regarded as adequate and highly competitive.

Cabotage and regulation

Forum countries will soon evaluate their international and domestic shipping regulations with the intent of liberalising and harmonising them. A report by Forsyth and Sisto (1999) found domestic shipping (that is intra-FIC services) to be inefficient (in both physical and financial terms), expensive, unreliable, and sometimes unsafe – despite being highly regulated.

Forum Economics Ministers recognised, at their meeting in 1999, that domestic and international shipping regulations in some countries, if restrictive, might prevent those countries from gaining the maximum benefit from the proposed Pacific Regional Trade Agreement currently under consideration.

This evaluation, and any modifications to national regulations that result from it, will increase regional co-operation and trade by ensuring that inconsistent shipping regimes do not prevent member countries from enjoying the full benefits of the free trade agreement. Although domestic shippers and port workers could be negatively affected in terms of employment, traders, consumers and travellers could expect to benefit from more frequent and less expensive services.

Any change to national shipping regulations is likely to require a difficult domestic political process, with many stakeholders being affected. Many countries may be affected, so that the process of harmonisation may require several years to reach a conclusion.

To assist this process the Forum Secretariat is currently co-ordinating two

studies into the scope for shipping regulation liberalisation and the social and economic impacts that may occur if regulations are modified.

Telecommunication

Regional co-operation in communications and information technology takes place through two mechanisms – Forum meetings and regional sector organisations. The relevant Forum meetings are the annual Economic Ministers meeting and the Communication Policy workshops and officials' meetings held in 1999. Each of these meetings has resulted in an Action Plan that is currently being implemented by the Forum Secretariat and counterparts. Regional organisations involved in communications include the Pacific Islands Telecommunications Association (PITA), the Asia Pacific Telecommunity Working Group for the Pacific (APT Telework-P), the Committee of Regional Organisations of the Pacific Information Sector Working Group (CROP-IWG) and the Fiji Internet/Intranet Group (FIG).

Regulation and tariffs

Members of PITA and Telework-P have agreed to jointly study mechanisms for regional co-operation in regulation, tariffs and service provision, among other topics. Among the options in all of these areas are the development of regional standards to be adopted by member countries and the possible creation of a regional regulating body.

The joint meeting of PITA and APT Telework-P held in Suva in 1999 was the first time the two organisations had met together. Since this meeting followed the Forum Communication Policy Meetings, the Forum Communication Action Plan was very influential. Most of the outcomes of the Forum Communication Policy Meeting were adopted or incorporated into the plans of these two groups.

By co-operating on these matters, members expect to benefit from economies of scale in administration and technical support, stronger negotiating positions with service providers, and broader knowledge bases.

This work will be considered by Communications Ministers in early 2001, at which time decisions on regional strategy in regulation are expected. Members of PITA and APT Telework-P are developing and circulating discussion papers under Forum Secretariat co-ordination in preparation for the next joint meeting to be held in Papua New Guinea in August 2000. The area of regional co-operation that is most likely to be successful is in regulation, through sharing of experience and analyses. Most telecommunication service providers in the region have been privatised or corporatised, so that direct influence over operations and tariffs is limited.

Internet

The Forum Secretariat has sponsored studies, policy papers and action plans for regional involvement and co-operation in information technology. The most recent was the report Pacific Island Involvement in the Global Information Infrastructure (1998). Members of PITA and Telework-P have also agreed to jointly study mechanisms for regional co-operation in Internet applications and addresses.

A trial of full Internet services began in Fiji in December 1995 under the auspices of SOPAC. The trial was intended to develop a model for service provision for other island countries. Costs were prohibitive, so the Fiji Internet/Intranet Group (FIG) was formed by several regional organisations (SOPAC, Forum Secretariat, European Union, South Pacific Commission, UNDP), local tertiary institutions, and one government department. FIG has remained active as use has spread more widely, although Internet services are now provided commercially through Telecom Fiji.

Initially, FIG partners benefited operationally by sharing the cost of a leased line and by sharing information on the local intranet. Now that Internet services are provided commercially, regional co-operation is expected to extend to applications.

Studies underway will increase collaborative work on such topics as distance education, tele-medicine, and e-commerce, thus taking advantage of collaborative learning and economies of scale. The CROP Information Sector Working Group (IWG) will be involved in developing action plans for regional applications. CROP-IWG and FIG are both expected to be involved in discussions over Internet access prices and alternative service arrangements in those countries with monopoly Internet service providers

Education

There are two key regional education agencies – University of the South Pacific (USP) and the South Pacific Bureau for Educational Assessment (SPBEA). USP is discussed further below. The SPBEA advises governments on examinations at the upper high school level as well as setting and marking examinations at this level. It also provides limited support for examinations held at the junior and primary schools levels. There are a number of other tertiary institutions within the region that attract a limited number of students from other Pacific Islands countries. These institutions include the University of the Papua New Guinea, National University of Samoa and the Solomon Islands University of Technology (formerly Solomon Islands College of Higher Education).

University of the South Pacific

The USP is the key Pacific regional university with campuses in Samoa and Vanuatu and distance or extension centres in most Pacific Island countries. The university has a number of faculties and institutes which are involved in Pacific regional programmes, for example the Institute of Education (which manages the Basic Education and Literacy programme in co-operation with UNICEF and a number of other donors) and the Institute of Justice and Applied Legal Studies (which develops Human Rights Education programmes with donor funding).

The USP was founded in 1968. It is owned and operated by 12 Pacific islands countries and territories (Cook Islands, Fiji, Kiribati, Nauru, Niue, Republic of Marshall Islands, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Samoa). It is one of only two regional universities in the world.

The mission of the university is 'the maintenance, advancement and dissemination of knowledge by teaching, consultancy and research and otherwise, and the provision at appropriate levels of education and training responsive to the well-being and needs of the communities of the South Pacific'. USP is committed to providing the governments and peoples of its member countries with high quality, internationally recognised, relevant, and cost-effective higher education and training, research publications and consultancy services. It is also committed to providing academic leadership in the university region and promoting regional co-operation and goodwill in collaboration with other regional organisations.

Regional security and financial intelligence

The 1992 Forum Honiara Declaration on Law Enforcement Co-operation identified certain areas of law enforcement that had emerged as particularly important to members. These included necessary legislation to strengthen effective law enforcement co-operation in the region and combat the threat from transnational crime, customs issues, police issues, drugs issues and training. It is believed that regional co-operation can assist in meeting these needs.

The Secretariat has been working closely with regional specialist bodies such as the Oceania Customs Organisation, Pacific Islands Law Officers Meeting, Pacific Immigration, Directors' Conference, South Pacific Chiefs of Police Conference, Regional Heads of Prisons Meeting, and international organisations such as the Commonwealth Secretariat, the Asia/Pacific Group on Money Laundering Secretariat and the UN International Drug Control Programme in these priority areas.

A newly emerging area for regional co-operation is in the sharing of financial intelligence. It was agreed, at the FEMM in July 1999, to undertake a feasibility study into the establishment of a mechanism for financial intelligence information sharing amongst Forum members. This proposes the better collection of, and access to, information required for carrying out vetting or due diligence checks on the standing of persons or entities, and also information for the purposes of countering money laundering, fraud and related criminal activity.

The need for such a mechanism has been recognised for some time. FICs are at risk from illicit financial schemes which can be damaging for their economies and money laundering. In the case of FICs with offshore jurisdictions, illicit financial schemes can be damaging to the integrity of their jurisdictions and to the 'well-being' of other countries. The late-1999 allegations of money laundering by the financial institutions or companies incorporated in two FICs is a further indicator of the need for the sharing of financial information between member countries.

The benefits to FICs of co-operation in financial intelligence include greater access to substantial databases and intelligence networks, similar to those used by larger countries. This should result in reduced costs for each country of assessing investors, as opposed to an *ad hoc* approach to financial intelligence. Indirectly, the development of a rigorous assessment process which will stand up to international scrutiny will add to a business environment which will encourage further investment and also growth of the financial sector.

In addition, all members of the Forum have endorsed the Honiara Declaration and so committed themselves to reduce regional threats from criminal activities, especially transnational criminal activities, by taking a more integrated approach to countering crime. This includes a commitment to abiding by the 1988 UN Convention Against Illicit Trafficking in Narcotic Drugs and Psychotropic Substances and considering the Financial Action Task Force recommendations. The sharing of financial intelligence information will support members' obligations under the Honiara Declaration.

A Steering Committee consisting of the Asia/Pacific Group, Australia, New Zealand and the USA has been set up to oversee this study, which is being partially funded by the USA. The recommendations will be first reported to the Forum Regional Security Committee in June 2000, and once agreed will then be put to the FEMM in July 2000 for consideration.

Annex 1. Membership of regional organisations

	Forum Fisheries Agency Program	Pacific Islands Development Program	South Pacific Forum	South Pacific Applied Geosciences Commission	Pacific Community	South Pacific Regional Environment	South Pacific Tourism Organisation	University of South Pacific
Australia	X		X	X	X	X		
Cook Islands	X	X	X	X	X	X	X	X
Micronesia	X	X	X	X	X	X		
Fiji Islands	X	X	X	X	X	X	X	X
Kiribati	X	X	X	X	X	X		X
Nauru	X	X	X		X	X	X	X
New Zealand	X		X	X	X	X		
Niue	X	X	X	X	X	X	X	X
Palau	X	X	X		X	X		
Papua New Guinea	X	X	X	X	X	X	X	
Marshall Islands	X	X	X	X	X	X		X
Samoa	X	X	X	X	X	X	X	X
Solomon Islands	X	X	X	X	X	X	X	X
Tonga	X	X	X	X	X	X	X	X
Tuvalu	X	X	X	X	X	X	X	X
Vanuatu	X	X	X	X	X	X	X	X

Annex 1 (continued)

	Forum Fisheries Agency	Pacific Islands Development Program	South Pacific Forum	South Pacific Applied Geosciences Commission	Pacific Community	South Pacific Regional Environment Program	South Pacific Tourism Organisation	University of South Pacific
Non-Forum members	—	American Samoa French Polynesia Guam New Caledonia N/Marianas Pitcairn Islands Tokelau Wallis and Futuna	—	Guam	American Samoa France French Polynesia Guam New Caledonia N/Marianas Pitcairn Islands Tokelau United Kingdom United States Wallis and Futuna	American Samoa France French Polynesia Guam New Caledonia N/Marianas UK on behalf of Pitcairn Islands Tokelau United States Wallis and Futuna	American Samoa French Polynesia New Caledonia	Tokelau

Annex 2. Identification of factors contributing to the primary constraints to development of the Pacific Region

Primary problem Development constraints	DETERIORATION IN LIVING CONDITIONS caused by economic stagnation preventing opportunities for improvement in the quality of life for the peoples of the Pacific Islands		
	DECLINING HEALTH	UNSUSTAINABLE FRESH WATER SUPPLY	ENVIRONMENTAL DEGRADATION
Social Infrastructure and Environmental Constraints (Level 3)	• Inadequate health facilities • Inadequate distribution of pharmaceuticals • Lifestyle diseases • Rapid population growth	• Increasing human needs and other demands • Inadequate sanitation system • Pollution	• Lack of awareness • Frequent disasters • Improper resource management • Inadequate waste disposal
	LOW LAND RESOURCE PRODUCTIVITY	LOW MARINE RESOURCE RETURNS	INADEQUATE PRIVATE SECTOR DEVELOPMENT
Production Sector Constraints (Level 2)	• Difficult access • Small markets • Lack of fertile land • Pests • Diseases • Poor resource management • Resource depletion • Unscrupulous developers	• Lack of local involvement • Insufficient compliance by resource developers • Inadequate monitoring and surveillance • Unsustainable resource extraction	• Lack of domestic savings • Lack of foreign capital • Limited investment opportunities • Limited access to regional and international markets • Non-capitalistic cultural attitudes • Inadequate marketing and promotion
	HIGH TRANSPORTATION COSTS AND INADEQUATE COMMUNICATIONS		DEPENDENCE ON HIGH-COST ENERGY SOURCES
Economic Infrastructure Constraints (Level 1)	• Geographic isolation • Long distance to export markets • Lack of media options and service providers • Lack of information		• Inadequate national management capabilities • Inadequate performance of power utilities • Lack of rural energy services
	LACK OF AN ENABLING POLICY ENVIRONMENT		INADEQUATE SKILLS BASE
Lack of an Enabling Environment (Fundamental)	• Poor governance • Institutional inadequacies • Lack of information and understanding of key economic development policy issues • Lack of capacity for policy analysis and planning • Lack of technical assistance and funding • Frequent natural disasters • Gender inequality		• Inadequate basic education • Inadequate access to facilities • Poor/inappropriate curriculum • Lack of management, entrepreneurial and vocational/technical training • Absence of long-term strategic human resource development plans

Annex 3. Regional Strategy for Addressing Constraints and Achieving the Overall Development Goal

Overall Development Goal	**Sustainable Economic Growth Leading to Improvements in the Quality of Life for the Peoples of the Pacific Islands**		
Social Infrastructure and Environmental Programme Strategies (Level 3)	HEALTH AND POPULATION	WATER SUPPLY AND SANITATION	ENVIRONMENT
Production Sector Programme Strategies (Level 2)	LAND RESOURCES MANAGEMENT	MARINE RESOURCES MANAGEMENT	PRIVATE SECTOR, TRADE AND TOURISM
Economic Infrastructure Programme Strategies (LEVEL 1)	TRANSPORT AND COMMUNICATIONS	ENERGY	
Enabling Environment Programme Strategies (Fundamental)	GOVERNMENT AND CIVIL SOCIETY	EDUCATION AND TRAINING	

Appendix 1

Global Conference on the Development Agenda for Small States held at 1 Great George Street, London, 17–18 February 2000

Summary of Proceedings

Introduction

This Conference was organised by the Commonwealth Secretariat/World Bank Joint Task Force on Small States. Its main purpose was to discuss vital issues of concern to small states, in order to facilitate the finalisation of the interim report of the Task Force prepared in October 1999. The meeting was attended by 196 participants, representing 42 governments and 26 multilateral, bilateral and regional organisations, together with representatives of NGOs and the private sector (see Annex A for Directory of Delegations, Organisations, Observers and Secretariat). The Conference was chaired by the Rt Hon Owen Arthur, Prime Minister of Barbados.

Day One, Thursday, 17 February

Opening Session

Dame Veronica Sutherland, Deputy Secretary-General (Economic and Social Affairs), Commonwealth Secretariat, and the Co-chair of the Secretariat/World Bank Joint Task Force on Small States, opened the meeting with some brief remarks. She indicated that the main purpose of the Conference was to undertake the widest possible consultations with a broad spectrum of stakeholders involved in small states' development, in order to facilitate the finalisation of the interim report of the Task Force prepared in October 1999. She hoped that it would focus on four vital issues: reducing vulnerability; mobilisation of support for capacity-building; transition of small economies from a preferential trading system to a freer global trade regime; and globalisation.

In his opening remarks, **Mr Masood Ahmed**, Vice-President, World Bank, and the Co-chair of the Task Force, stressed the importance of the consultation process for its work. The Task Force considered this process to be vital in ensuring that the views of stakeholders were adequately and accurately reflected in its report. Mr Masood added that the final report would emerge from the discussions of this conference. However, it could not cover all small states' issues exhaustively and provide definitive solutions to overcome them. The report would set out a contextual framework which would provide a sound basis for developing programmes appropriate to the particular circumstances of individual countries. In conclusion, Mr Ahmed said that the final report will be presented to the April 2000 meeting of the Development Committee of the World Bank and the IMF.

The **Rt Hon Owen Arthur**, Prime Minister of Barbados, in his opening state-

ment, said that this was a historic conference (see Annex B). Though the international community had taken cognisance of the particular vulnerabilities of small states, this was the first time that they had shown the political will to devise specific measures to address those vulnerabilities. The Prime Minister observed that the conference was expected to provide a definitive analysis and a set of recommendations for addressing the problems associated with vulnerability. He remarked that small states were themselves taking steps to more fully integrate their economies into the global economy. But these were insufficient, since the changes brought about by globalisation were so profound. A new development partnership between the institutions of the international community and small states was needed to address these issues. In conclusion, the Prime Minister said that the deliberations of this conference would help the Task Force not only to finalise its report but to establish a continuing agenda for action and analysis by small states themselves and by international organisations.

First Plenary Session: Reducing Vulnerability

The **Rt Hon Owen Arthur**, Prime Minister of Barbados, chaired this session. In his introduction, the Prime Minister briefly outlined the focus of the three presentations that were to follow: factors affecting vulnerability by Chris Easter; commodity risk management by Nawal Kamel; and new approaches to disaster insurance by John Pollner.

In his presentation, **Dr Chris Easter**, Commonwealth Secretariat, focused on the concept of vulnerability and on the Commonwealth Secretariat's efforts to develop an index to measure vulnerability. He noted that small states were inherently more vulnerable and that they also had limited resources with which to meet the threats. Dr Easter defined vulnerability as 'exposure to external economic forces and environmental hazards over which they had little, if any, control'. He noted that this definition had two dimensions: that of the impact of threats and the ability to withstand them (resilience). Though vulnerability was an abstract concept, it was characterised by income growth volatility, which was 25 per cent higher for small than for large states.

Dr Easter outlined the criteria used in developing the Commonwealth Secretariat's vulnerability index (plausibility, simplicity, suitability for international comparisons, non-overlapping and ease of comprehension). The index used data for 111 countries of which 34 were small states with a population of under 1.5 million. The components of the index were: economic exposure (trade openness and lack of diversification); environmental hazards and events; and resilience (which can be viewed as the critical mass of resources needed to meet the challenges, and was represented by GDP). The results of the index showed that small states were more vulnerable than larger states. Twenty-six of the 28 most vulnerable countries were small states, while the 28 least vulnerable states were all large states. The index could be used as an additional criterion in determining country status for graduation and eligibility for differential treatment, and to formulate policies to reduce vulnerability, especially in the areas of trade openness; diversification to spread the risks of exposure; commodity price risk management; and disaster preparedness and mitigation, including catastrophe insurance.

Ms Nawal Kamel, World Bank, made a presentation on the topic, 'Commodity Risk Management in Developing Countries: a Proposed Market-based Approach and its Relevance for Small States'. She noted that small states had solid experience of how fluctuations in commodity prices affected their development. She said that commodity price fluctuations were not a new problem and had been much discussed even at the original Bretton Woods conference, where the UK delegation argued strongly for the establishment of an international institution to stabilise commodity prices. In the 1960s and 1970s, a number of programmes and schemes were developed to assist developing countries to cope with commodity price fluctuations but these soon became untenable and were dismantled. The time had come to think again and propose measures on the basis of new market-based tools. Ms Kamel said that the World Bank had taken the lead in examining this issue with the help of an International Task Force, which included international and regional organisations, the Commonwealth Secretariat, the private sector and representatives of small-scale producers.

Ms Kamel said that the report of the Task Force had concluded that markets had generated the instruments needed to address the problem, but that these had not reached those who needed them most, such as small producers in vulnerable developing countries. This indicated the existence of a market-gap, which needed to be addressed by international mediation so that price-protection could be provided to small producers through a guaranteed floor price for producers and a ceiling for importers.

Ms Kamel outlined three dimensions that needed to be addressed:

- technical assistance to ensure the continued flow of price information to small-scale producers in developing countries and to build institutions to provide retail price protection for them;
- the bringing together of providers of insurance with potential users in developing countries, which involved bridging the trust and information gap;
- the production of price protection mechanisms where the private sector was unable or unwilling to do so and thereby extending the market.

Ms Kamel noted that a price insurance scheme for small-scale producers in developing countries could be made operational and had already inspired some action (for example, the new ACP/EU Agreement included a clause to provide price insurance schemes for ACP countries). However, more work was needed to advance the commodity price insurance proposal.

Mr John Pollner, World Bank, made a presentation on the topic 'Pooling Catastrophe Insurance Risks with Alternative Risk Financing Mechanisms to Mitigate the Economic Effects of Natural Disasters'. In his presentation, John Pollner outlined a financing mechanism which the World Bank was developing for the Caribbean on the basis of insurance to hedge against losses from natural disasters. He noted that extended insurance coverage was required in catastrophe-prone countries in order to ensure sustainable growth following natural disasters.

This would give priority to non-insured sectors such as government property assets, infrastructure and small businesses. This involved examination of issues such as high premiums, unavailability or lapses in coverage, fiscal load in subsidising reconstruction efforts and weak insurance regulations. Domestic prices for insurance in the Caribbean were high because they were sensitive to international price movements. For instance, the industry experienced a capacity-crunch in the early 1990s, which contributed to price increases. The increase in property values world-wide had also increased the scale of losses caused by weather-related disasters, thereby driving-up insurance premiums. The World Bank believed insurance was an effective policy tool and that it should be promoted, especially to cover public sector assets and the small-business sector. To achieve this, there was a need to provide more country-specific risk ratings, based on accurate estimates of exposure to risks.

Mr Pollner outlined a number of tools that could be used to expand the availability of insurance and reduce volatility through improved risk management such as:

- more effectively channelling catastrophe risks to the international market;
- pooling of risks by countries;
- the use of risk financing, credit instruments, and catastrophe bond schemes using intensity level triggers;
- investments to reduce the vulnerability of structures; and
- the creation of a robust domestic insurance industry by addressing regulatory and technical needs.

The Representative of the Caribbean Regional Negotiating Machinery remarked that the presentation of a market-based approach to commodity risk management had been lucid but it was not realistic. The scheme had overlooked the all-important differences between large and small producers, old versus new producers, and those whom he called the free-riders. He wondered how a scheme limited to small producers would deal with the price behaviour of large producers, who generally tried to capture a large market share in a declining market. In this context, a successful scheme would need unlimited resources if it faced such price behaviour. He was also sceptical about the commodities which had been selected for analysis, such as aluminium, cocoa and coffee. These had been subjected to several failed experiments with price stabilisation over the past decades.

The Representative of Guyana said that the Bank's presentation required several clarifications. First, there was need to provide examples of commodity risk management operations in practice, especially in industrial countries where different tools of intervention like subsidies and buffer stocks were employed to stabilise prices. The IMF's Compensatory and Contingency Financing Facility and the EU's Stabex had been virtually phased out. However, export earnings stabilisation schemes did not deal with price instability. On the other hand, they were very expensive for donors but did not provide adequate assistance for commodity exporters. Hedging operations sounded interesting but had to be demonstrated in practice. As regards the Bank's proposal, it seemed to raise the question of the

capacity of developing countries to exercise surveillance over such complex insurance operations.

The Representative was also curious about the feasibility of the insurance scheme for managing catastrophe risks and the cost of such premiums. Disasters seemed to strike down the same part of a region with frightening regularity as in the case of the Caribbean: how plausible would it be for such countries to be attractive to insurers?

Ms Nawal Kamel, World Bank, clarified that the focus of their effort was on poverty reduction and not price stabilisation. The structure of production depended on the organisation of the local market and the commodity itself. Therefore, both small and big producers could be involved, even including governments. The International Task Force's thinking had been that whatever price protection was purchased, the benefits would trickle down to the small producers through local transmission mechanisms. The focus would be on commodities most relevant to developing countries. But it would be a case-by-case approach. The scheme did not seek to address trends and levels of prices or stabilisation of prices. However, the insurance scheme would reduce the uncertainty associated with price volatility. It would be a tool to buy predictability of price for one/two crop years ahead, which would help small producers to plan their production and diversification. Once a minimum price was guaranteed it would also be feasible to secure credit from local banks to purchase inputs for production.

The Representative of the OPEC Fund observed that the issues being discussed by the Conference were not new. In the late 1970s, the Fund had facilitated the establishment of two institutions – the Common Fund for Commodities and IFAD – in order to help regulate prices for primary producers. Unfortunately, many developed countries did not join these bodies and several members who had initially joined withdrew later, so that their resources were dissipated and major activities such as stabilisation of prices could not be undertaken. While he agreed with a market-based approach as proposed, he also wondered why everything was being pushed to the markets. He was also concerned about the cost of insurance, since even when there was a season of good crops the premium burden had to be borne by the countries.

The Representative of the Caribbean Disaster Emergency Response Agency observed that the question of resilience was very important in determining any insurance scheme, and that this issue did not seem to be addressed in any sustainable way by the scheme under discussion. On the policy side, there would be need to consider differential treatment, informed by enhancement of resilience, for example special financing for relocating critical facilities; and debt relief for the disaster affected economies. There was also an opportunity to consider how to link poverty alleviation with the human element of resilience.

The Representative of St. Lucia commented that his country had experienced a combination of price and supply effects of negative terms of trade. The Stabex scheme had addressed both effects and hence his country, along with others, was working hard to preserve that scheme. He wondered if the Bank's proposal

adequately addressed the supply side problems.

The Representative of Samoa said that he had a particular interest in the catastrophe insurance scheme and looked forward to the World Bank's Caribbean initiative in this area. He wished to make a general observation that the focus on disasters should not be on events to be tolerated but should view them as an essential part of the sustainable development process. International co-ordination was needed to strengthen capacity for disaster prevention and anticipation, including sharing of information. The International Disaster Reduction Effort showed that in 1998, the estimated cost of disaster damage worldwide had been $98 billion, of which only 2 per cent came from insurance funds. Any insurance regime had to be devised as a response to a global climatic phenomenon. Small island states were especially vulnerable to external factors. In this context, he said that environmental vulnerability was a very important criterion for the Vulnerability Index.

The Representative of Lesotho believed that the conference was timely and he hoped it would achieve its purpose of setting up long-term strategies to deal with vulnerability. His country provided a classic example of a small state facing severe vulnerability problems due to its location – completely surrounded by a powerful neighbour. By way of example of vulnerability due to the changing fortunes of the powerful neighbour, he cited the case of the fall in the price of gold in 1999 which led to a major retrenchment of its workers from South African mines. The national unemployment rate of 34.2 per cent worsened with the addition of 5000 unemployed migrant workers to the workforce. Remittances on which the economy depended also dwindled. Its economic scenario was grim, with the added impact of a serious drought. He thought that the 1.5 million population threshold used in the Task Force report was arbitrary as it would disqualify his country and several other vulnerable countries from special and differential treatment.

The Representative of Cape Verde shared similar views about the Vulnerability Index. He believed that the Index ought to take into account economic realities, and ecological, geographic and demographic vulnerabilities. There were several countries within sub-Saharan Africa and the Sahel region which did not meet the criteria of 'smallness' but which were extremely vulnerable and merited special treatment. It would be important to look at all components of vulnerability and ensure that vulnerable states received the wherewithal to make the transition to sustainable development. The reduction of poverty was essential for the economic security of small states. The impact of globalisation in exacerbating problems such as drug trafficking also had to be looked at in the context of the Vulnerability Index.

The Representative of Mauritius reminded the delegates that the central objective of the Conference was to develop some consensual proposals to overcome small states' key concerns. Most importantly, there was need to agree on a proposal which would see the establishment of a specific category of small states with unique problems and constraints – not in competition with groups such as the least developed countries – but to devise measures which were complementary and specific to the vulnerability of small states. He referred to Agenda 21 of Rio

and the recent 22nd Special Session of the UN General Assembly, which had endorsed the new Commission for Sustainable Development and recognised that small island developing states (SIDs) merited special treatment on account of their dispersion and isolation. He suggested that the present Conference needed to build on these initiatives and ensure that SIDs received special treatment within the WTO, IMF and the World Bank. The UN would be reviewing the special case for the least developed countries later in the year and he hoped that this conference could approach it in order to obtain special and differential treatment for SIDs as well.

Professor Compton Bourne, University of West Indies, observed that the commodity risk management proposal had ignored an important part of income risk: i.e. failures at the production end arising from adverse climatic factors. Moreover, too much emphasis had been placed on the use of capital markets instruments – even in industrial countries, as the paper on catastrophic risks pointed out, governments had found it necessary to utilise non-market instruments to address the problem of risk. It would be necessary to examine the practicality of market-based arrangements. On the measurement of vulnerability, he tended to agree with the representative of Lesotho that the population measure was arbitrary and would exclude several vulnerable states. Smallness in economic size was what was significant. The speaker defined this to include the inherent sub-optimality of small states: this meant difficulties in achieving economies of scale; inadequate competitiveness; limited resource base; product specialisation; limited labour force; shallowness of capital markets; and high transport costs. The Interim Report of the Task Force had touched on these characteristics but had suggested that these were shared across states, which they were not. Much was made of insularity in the Report, but landlocked countries also had specific vulnerable characteristics, which it would be important to include in any criteria defining vulnerability. He suggested the need to refine the Vulnerability Index and address the issue of the economic resilience of vulnerable countries.

The Representative of Grenada noted that countries which were dependent on service exports showed similar characteristics to commodity producers but the commodity risk management scheme had little relevance for them; it would be important to recognise that long-term diversification was the real solution to problems of commodity production; and that natural disasters destroyed the economies of small states completely and, therefore, market-based solutions were not realistic.

The Representative of Maldives said that the Commonwealth Vulnerability Index needed further refinements if it was to be used as an instrument by other agencies dealing with small states. The UNCDP did not adopt the index because of its limited nature. In his view, there was a high correlation between the LDCs and SIDs.

Second Plenary Session: Capacity-Building, Delivering Effective Development Assistance at Lower Transition Costs

Mr Masood Ahmed, Vice-President, World Bank, chaired this session. He invited Ms Wendy Jarvie, World Bank, to present the experience of the Bank on aid co-ordination.

In her presentation, **Wendy Jarvie** said that the findings from a study carried out by the Operations Evaluation Department (OED) of the World Bank had confirmed that aid co-ordination policies had proved ineffective. For example, there had been little or no improvement in the coherence and selectively of donor activities, donor/Bank policies had hindered harmonisation efforts at country level, co-ordination had not assisted significantly in improving in-country capacity, and only occasionally aid-recipients had taken the lead in managing aid.

Ms Jarvie observed that at the same time, the climate around aid co-ordination was proving to be more challenging with the declining volumes in aid, an increased number of players, including an increased number of NGOs, and more projects. She described the increasing number of projects being implemented in a number of developing countries, together with the increasingly stringent and complex procedures, as 'the aid bombardment syndrome', which overwhelmed the capacity of governments to manage project development.

She noted that, for small states, the problem was exacerbated by their higher aid dependency. Barriers to effective aid co-ordination included multiple visiting missions, the sheer number of donors, lack of country capacity and the demands of different reporting requirements.

The differences in perception between donors and recipient countries regarding objectives of aid co-ordination further fuelled tensions. Governments considered their involvement as crucial; the Bank and donors did not. Differences persisted with regard to the levels of involvement by donors and governments. And while governments had continued needs to mobilise more resources, donors were increasingly stressing issues like good governance and involvement of civil society.

Ms Jarvie pointed out that the time was ripe for change: developing countries wanted to manage aid, and to play a leadership role in designing new policies and directions. She pointed out that there was a window of opportunity for building creative partnerships between donors and countries. For example, the UNDP and the World Bank had formed a 'Joint Partnership Group' to progress over the next year a joint policy on harmonisation, with inputs from developing country partners in order to identify best practices.

As regards the way forward, Ms Jarvie pointed to the need for donors, including the Bank, to promote and support strategies for capacity-building and to respond to the needs of countries that were keen to manage and lead programmes. There was also a need to harmonise reporting procedures and to involve civil society. Developing countries, on the other hand, should strengthen their commitment to financial accountability and to building institutional capacity.

In conclusion, Ms Jarvie said that sector-wide approaches, with participation of donors and transparent information-sharing, offered strong possibilities for aid co-ordination.

In his introduction, **Dr Dwight Venner**, Governor of the Eastern Caribbean Central Bank (ECCB) noted that the background to his presentation was linked to a World Bank study on improving development practices in the Caribbean that

was carried out in collaboration with Bank's Development Programme at Harvard University. Dr Venner noted that, with many small states themselves being members of the World Bank, the study offered a practical approach to aid co-ordination.

This study covered the five major aid donors operating in his region. The methodology it utilised included an analysis of the project portfolios under implementation by the five major aid agencies operating in the Caribbean. One such area analysed was education, where donors remained active, with considerable overlap. Dr Venner noted that sectors such as health and the judicial system were not included in the analysis. He added that there appeared to be a broad correlation between the resource allocation and the overall donor priorities. However, it was not clear from the study whether there was a match between resource allocation by donors and the perceived needs and priorities of aid recipients.

Dr Venner drew the meeting's attention to the existing realities in the OECS countries. He said that the absorptive capacity of the OECS to accommodate all bilateral and multilateral agencies operating in the region was limited. The demands of frequent and unco-ordinated visits often put these countries under severe pressure. He stressed the need for donors and recipients to look at strategies for addressing these issues.

Dr Venner noted that the response of the OECS, as an organisation, was to develop a Regional Economic Development Plan as part of a strategy to improve and address the need for aid co-ordination in the light of ever-decreasing levels of aid and human resources. He added that the OECS was capable of providing such services to member governments in view of its treaty-based origin.

Dr Venner stressed that the issue of aid co-ordination was vital to the OECS and added that standardisation of reporting requirements among agencies was an important aspect of the co-ordinating process. He drew the meeting's attention to the many recommendations coming out of the study, and stressed that there was need for follow-up work on those recommendations. While it was felt that the study provided a practical approach to understanding the issues of aid management and development assistance, Dr Venner noted that the need for strategies for effective use of donor support was an issue which required much greater attention.

The Chairperson thanked the two presenters and opened the floor for discussion.

The Representative of Antigua and Barbuda pointed out that the issue of co-ordinating aid was fundamental in view of inadequate capacity in many small states. In his view, the idea of 'Pools of Experts', developed earlier in the Caribbean, needed resuscitating. The capacity to design projects was also lacking. He raised a question as to whether small states should consider developing regional capacity or national capacity to overcome these problems. Donors could help build this capacity by providing experts at regional level and training at national level.

The Representative of CARICOM said that while all donors agreed with the need for aid co-ordination, none wanted to be co-ordinated by another agency. In his view, the lack of leadership of this co-ordination role was a crucial problem. This problem could be resolved by assigning the leadership role to the recipient country.

The Representative of Guyana said that the effectiveness of aid should be measured not by its quantum, but by its relevance to the needs of the people and by how much the assistance contributed to the development of a particular country or region. In this respect, investment in human capital was crucial. Aid conditions, such as the provision of experts from the aid-originating country should be removed, and instead donors should be encouraged to employ local experts; this would reduce transaction costs. Technical co-operation among developing countries had proved to be an excellent means of reducing costs.

The Representative of the United Kingdom pointed out that the cost of failure of official development assistance (ODA) was greater in small states. He observed that there should be political will to improve aid co-ordination from the point of view of both parties. The representative indicated that Ms Clare Short, the Secretary of State for International Development, was determined to ensure that aid contributed to development, wherever it was provided. Ironically, in trying to strengthen local ownership of development projects/programmes, donors must increase field presence, at least initially, in order to ensure their smooth operation.

The Representative of Cape Verde indicated that aid funding should be negotiated for a specific project; co-funding of multiple projects created chaos if not integrated and co-ordinated. He stressed that leadership in aid co-ordination should be provided by the recipient country. It was necessary to harmonise the procedures used by different donors; financial assistance should be transparent and the responsibilities of donors and recipients should be spelled out clearly. There was also a need to address the problem of the lack of an organisation to direct external donor assistance; and there was need to develop an internal system for liaising with the donors.

The Representative of the Caribbean Regional Negotiating Machinery cautioned about the need for developing machinery for aid co-ordination. Governments needed to take into account the changing nature of aid, which was an important element. An AusAID report illustrated how aid was changing: emphasis was shifting from project financing to assistance to government budgets, institution building and policy-making. These were more 'intrusive' in nature, and explained donors' increased interest in governance issues. The representative pointed out how bringing solidarity on governance issues was seen as an important element of aid co-ordination by donors. Yet this had a different connotation to developing countries, who valued aid co-ordination mainly as a means of enhancing aid effectiveness.

The Representative of the South Pacific Forum Secretariat indicated that his organisation organised a meeting in 1998 in Fiji to share insights and lessons on aid co-ordination. The lessons learnt were set out in terms of a set of principles – such as partnership, ownership, transparency, responsibility and accountability. The conclusions of this meeting were relevant to the deliberations of this Conference. These were:

- close involvement of partner governments in project monitoring and review;

- decisions on activities to be supported should be made on the basis of developmental effectiveness;
- country-based programming should be based on genuine partnership and country and/or regional strategies;
- activities should be directly linked to the achievement of high-priority recipient government objectives;
- there was a need for balance in donor programmes, particularly the need to take account of public interest;
- recipient countries and donors needed to catalyse public support for reforms, in order to give more flexibility in addressing structural issues;
- foster strong partnership between the public and the private sector to achieve sustained growth cycle;
- the cost of aid needed to be evaluated, whether it was the opportunity cost of foregone activities or the recurrent costs of decisions made;
- there should be more recognition of the capacity constraints in the recipient countries.

Regional organisations could play an important role in reducing the transaction costs associated with flows of development assistance.

The Representative of Canada indicated that aid co-ordination was a critical issue. He pointed out that there was a large gap between theory and practice. The issue was not only one of political will, but of public education as well. Since development aid was a risky business, public education in donor countries was needed to underscore that development was a long-term business. He noted the high transaction costs arising for recipient countries from dealing with multiple donors. In his view, sectoral approaches would ease co-ordination and streamlining. The problem of donor co-ordination could also be tackled through the growing use of the Internet. Turning to the issue of capacity-building, the representative said that it was a critical one and there should be a balance between regional and national approaches.

The Representative of Samoa expressed the view that small states would need to rely on regional approaches for aid co-ordination. He thought that modern technology was essential for sharing information.

The Representative of the UNDP recalled the numerous consultations held by specialised UN agencies on the issue of aid co-ordination in order to ensure full integration of UN assistance in recipient countries. The UNDP had also been strengthening its collaboration with other multilateral and intergovernmental organisations to avoid duplication and build synergies. In particular, it had been active in supporting capacity-building in the field of governance.

Third Plenary Session: Sharing Capacity, Regional Co-operation/Integration Experience

Dame Veronica Sutherland, Deputy Secretary-General, Commonwealth Secretariat chaired this session. She invited Mr Byron Blake, Assistant Secretary-General, CARICOM, to make a presentation on the experience of the Caribbean Community in this area.

In his intervention, **Byron Blake** welcomed the emphasis given by the Commonwealth/World Bank Joint Task Force on Small States to capacity-building. In his view it was a vital element in the strategies to alleviate the vulnerabilities of small states. In his paper, Mr Blake attempted to focus the discussion on three critical factors for the Caribbean region: experience of co-operation and integration todate; measures facilitating integration/co-operation in the region; and the experience in terms of international support for such co-operation.

Mr Blake stressed that recent global developments had reinforced the relevance of a number of factors for integration in the Caribbean. These factors included efficiency, governance, strengthening of structures and capacity, reduced administrative costs, mitigation of external shocks/threats, and increased critical mass in key areas.

Tracing the historical development of regional co-operation in the Caribbean, Mr Blake said that under the Treaty of Chaguaramas, a Free Trade Area was established in 1973. The Caribbean Community (CARICOM), with 5 million people, resulted from this Treaty. However, the process of implementation had presented some difficult challenges and the FTA would only be completed later this year.

CARICOM had instituted the necessary institutional structures and arrangements to manage the regional integration processes. A range of co-operation actions and network arrangements were in place. These included various Councils of Ministers, for example Heads of Government, Finance, Trade and Economic Development, Foreign and Community Relations, and Human and Social Development. The advice provided by these Councils had wide-ranging economic implications for the region.

Attempts had been made to widen the Caribbean integration process: for example admission of Suriname and Haiti to CARICOM; creation of the Association of Caribbean States; asymmetrical trade arrangements between CARICOM and the Dominican Republic, Colombia and Venezuela; and participation in the negotiations of the US initiative on the Free Trade Area of the Americas. In addition, the Caribbean had promoted co-operation at the political level – for example, co-ordination of foreign policies and the management of the Caribbean Sea.

Other areas of co-operation were tertiary education; research and analysis, technical standards, capital markets, legal systems, HIV/AIDS and drugs. Some noteworthy successes of the Caribbean experience included the University of the West Indies, the Caribbean Examinations Council, the Pan Caribbean Disaster Preparedness and Prevention Project and the Basic Health Management Development Project. These had the support of international donors.

Furthermore, the private sector and NGOs had also moved toward co-operation. Notable regional initiatives included the Caribbean Banana Exporters Association, the Sugar Association of the Caribbean and the Caribbean Hotel Association. Also, some firms had undertaken research activities jointly.

Even at the regional level, there was no critical mass in certain skills and this was an impediment to the growth of some regional initiatives by the private sector.

Mr Blake observed that international organisations could greatly facilitate regional co-operation. He welcomed moves favouring regional initiatives rather than national ones. International assistance set out by donors had contributed to the successes of various regional arrangements in the Caribbean. These included: the Eastern Caribbean Central Bank (ECCB) and the Caribbean Development Bank (CDB); Part IV of the GATT trade arrangements, which permitted the operation of the Eastern Caribbean Common Market and the Caribbean Common Market; Preferential trade under the Lomé Convention; support from UNDP, CIDA, USAID and EU for strengthening several regional organisations, including the Secretariat of the Caribbean Community, the UWI and the OECS Secretariat; and the Pan-Caribbean Disaster Preparedness and Prevention Project.

USAID, EU, UNDP, EIB and CIDA had supported private sector level co-operation: good examples were the Caribbean Association of Industry and Commerce, the Caribbean Export Development Project, the Caribbean Investment Bank and the Eastern Caribbean Organisation of Development Foundations. While welcoming their support, Mr Blake emphasised the need for consistency of such assistance to allow for predictability to ensure the long-term development of regional programmes.

In terms of strengthening the regional integration process in the Caribbean, Mr Blake made the following proposals:

- the network of institutions should be strengthened and greater strategic use made of them;
- regional institutions should be viewed as complementary, and not parallel, to national institutions;
- these institutions should be endowed with greater authority to discharge their mandates and responsibilities; and
- there should be sharing of sovereignty with appropriate checks and balances.

The international community also had a role to play in strengthening regional integration. Specific proposals in this area included:

- recognition of regional co-operation as a legitimate part of the development of small economies and not merely as a means of reducing administration costs;
- continued international recognition of special treatment for small states in order to assist them through appropriate regional mechanisms;
- office facilities to be provided for small states on a regular basis to allow them to be represented at international fora such as the WTO.

In his presentation, **Mr Noel Levi,** Secretary-General, South Pacific Forum Secretariat, outlined the Pacific experience with regional co-operation and integration. He said that despite seemingly great differences, the experience of the Pacific Forum countries on regional co-operation had been positive. The South Pacific Forum Secretariat played a key role, not only in maintaining the political stability of the region, but also in articulating the region's major concerns at the international level. It had a facilitatory, consultative and development role.

The most successful regional organisations, apart from the SPF, were the Forum Fisheries Agency (FFA), which assisted countries with sustainable development of their fisheries resources; the South Pacific Applied Geoscience Commission (SOPAC); the University of the South Pacific; the Tourism Council of the South Pacific; the Pacific Islands Development Programme (PIDP); and the South Pacific Regional Environment Programme (SPREP). The Pacific success was based on several factors, including pooling human resources and attracting and retaining highly qualified personnel; sharing of knowledge and technology, and of experiences; cost-effective administration as well as providing a stronger united voice on the world stage; and negotiations conducted on the basis of regional priorities. The key outcomes of regional integration and co-operation in the region had been 'informed' decision-making, less duplication, greater efficiency and greater benefits.

There was a need to establish a regional mechanism to co-ordinate regional activities. For this purpose, the Council of Regional Organisations of the Pacific (CROP) was established recently. It was involved in setting regional development priorities and programmes through working groups in key sectors: e.g. marine and land resources, and information. It also ensured that regional organisations did not duplicate initiatives and that they shared resources more effectively.

The Pacific experience showed that the benefits of regional integration included:

- economies of scale leading to greater efficiency;
- pooling of human and financial resources;
- increased effectiveness of joint regional programmes;
- a more effective approach to external factors and constraints;
- complementary actions by regional organisations which enabled the broadening of domestic and bilateral interventions;
- greater regional stability.

Mr Levi outlined the recent developments concerning the creation of a free trade area in this region. This arrangement, Pacific Islands Free Trade Agreement (PARTA), was a major undertaking in regional economic co-operation between Forum Island countries. PARTA will be implemented in stages: up to 2009 for developing FICs, and 2011 for the Smaller Island States and LDCs. In his view, it provided a strong foundation for responding to issues concerning globalisation and universal trade liberalisation. It was expected to facilitate the development of a reciprocal trade agreement or a regional economic partnership between Pacific countries and the EU. PARTA also provided a framework for a cohesive political

strategy. Mr Levi was confident that this would positively influence economic and trade agreements of the region.

Turning to development assistance, he said that this had played a significant role in promoting regional co-operation. The best way to ensure sustainability of regional development efforts was to promote a genuine partnership between donors and recipients and to ensure that countries retained a strong sense of ownership. A key regional co-ordinating mechanism was needed to promote regional concerns with interested extra-regional states.

The Chairperson thanked the two speakers and opened the floor for discussion.

The Representative of Guyana endorsed the observations and conclusions of Mr Byron Blake on CARICOM experiences of regional co-operation and integration. He felt that while there had been progress in integration at the government and policy level, greater emphasis should be placed on the inclusion of the private sector and NGOs in the integration process. He stressed the importance of placing important issues affecting regional integration in the public domain so that civil society would be better informed about the motivations of government actions and these would support decisions. He also highlighted the importance of the international community in building capacity in the private sector and of NGOs, so that they could make important and useful contributions to the process of regional integration.

The Representative of Antigua and Barbuda highlighted the vulnerability of small economies in his region, which were heavily dependent on one or two export products. He stressed that it was important for these countries to diversify their economies and said that some, including Antigua, had diversified into offshore financial services. However, the new OECD rules and regulations regarding these services threatened their growth in small island states. He suggested that the debate on this issue needed to be broadened, from a bilateral to a multilateral setting.

The Representative of Samoa said that there was a wide and rich catalogue of initiatives in regional co-operation in the South Pacific region. The setting up of a nuclear non-proliferation regime (the first ever) was one of the great successes of integration in the region. However, there were still a number of areas where the region had been slower to seize the initiative. These included environmental issues, the use and conservation of marine resources, development of renewable sources of energy and the development of information technology. They required immediate attention at the regional level. Furthermore, the problems of urbanisation and youth unemployment also required urgent attention.

Professor Compton Bourne, the Pro Vice-Chancellor and Campus Principal of the University of the West Indies, stressed the importance of capacity-building to foster the knowledge industry. He pointed out that knowledge-intensive niche industries were increasingly competitive in the new global environment. To take advantage of these niches, it was critical to provide education and training to enhance human resources in the region. He suggested that in addition to regional co-operation, co-operation across regions was of greater importance for capacity-

building in the field of knowledge. Although there were programmes for north-south co-operation and sharing of knowledge, there were very few effective and successful programmes on south-south co-operation in this area.

The Representative of the European Union expressed his organisation's support for integration schemes and pointed out that the post-Lomé new Economic Partnership Agreements (EPAs) favoured regional approaches. He also stressed that the new EPAs went beyond the narrow focus on trade and looked for a more holistic approach involving development, structural adjustment and social integration. The EU was already trying to build this holistic vision into its programmes, but donors needed a more coherent and integrated development approach vis-à-vis small states.

The Representative of Grenada concurred with Professor Bourne's views on the importance of capacity-building in the knowledge industry for increasing the international competitiveness of the region. He said that although appropriate domestic policies were a necessary prerequisite for increasing competitiveness, they were not sufficient. The development of institutional capacity to enforce policy reforms was of paramount importance. The speaker highlighted the need for regional programmes aimed at developing such capacity.

The Representative of the UNDP gave an assurance of his organisation's support for capacity-building in small states and enumerated a number of programmes and projects that UNDP had undertaken in order to achieve this objective.

The Representative of the Cayman Islands registered his country's pleasure in being invited to a meeting of the Task Force for the first time. He underlined the fact that small states had the fifth largest financial sector in the world. Having anticipated globalisation in the 1960s, some small states had set up offshore financial centres to service international financial markets more efficiently by cutting through a myriad tax and banking regulations. Currently the OECD countries were discussing the issue of tax regulation with countries which offered offshore financial services. He stated that the matter of tax regulations was an isolated issue in the whole debate on the financial service sector and globalisation. There were a number of other related issues that also merited consideration and debate – competitiveness, subsidies, etc. – but which were not captured in the OECD discussions. His country wanted the inclusion of these related issues on the OECD agenda.

The Representative of Barbados raised the issue of the relative influence of regionalism versus multilateralism on small states. He said that regional and multilateral commitments could sometimes be at odds with each other. The Commonwealth analysis had understated the importance of regionalism and its potential. The representative argued that regional integration should be regarded as a stepping stone for global integration. He also argued that the international community needed to support capacity-building to strengthen regional co-operation and integration in small states.

The Representative of Mauritius outlined the experience of Mauritius with regional integration. Mauritius was a member of SADC, IOCR and the Common

Market of Eastern and Southern African Countries (COMESA). Whilst regional integration was seen as a stepping stone to global integration, the experience of his country was that integration was not a panacea for all problems. The three regional groups involving Mauritius included countries at varying levels of development. This type of uneven development created problems in advancing the process of integration. The representative argued that it was important for small states to be accorded special and differential treatment (SDT) in the international system in order to enable them to compete internationally.

The Representative of France stated that her country understood the concerns of countries which provided offshore financial services and the impact of new OECD rules and regulations on their economies. The French concern was that these countries did not have the required institutional structures, policy frameworks and capacity to combat money laundering. The OECD regulations were aimed at combating money laundering.

The Chairperson thanked the discussants and announced that after the tea-break, the Conference would be re-convened by regional groups: Africa, the Caribbean and the Pacific. The main objective of these sessions was to bring in regional dimensions to the deliberations of the Conference.

Regional Break-Out Sessions

(a) Africa Region

Mr Godfrey Gaozeb, World Bank, chaired the meeting and the Rt Hon Rajkeswur Purryag, Deputy Prime Minister, Mauritius, was the rapporteur.

The Chairperson explained the objectives of the session and emphasised the importance of developing some concise conclusions to be presented to the ensuing plenary session. He pointed out the diversity of the Commonwealth and suggested that this session provided an opportunity for African delegates to provide comments on the basis of the background documents presented to the conference.

The Representative of Seychelles said that a number of small states had been graduated from the World Bank. This issue was of particular concern to his country, since it could not borrow from the Bank though it faced massive balance of payments problems. He also raised the issue of the push for 'open skies' and the effect that it had on tourism and the environment. He added that tourism was the most important source of foreign exchange earnings for Seychelles. His country had gone for selective tourism to preserve the environment and would have difficulties in embracing an 'open skies' policy.

The Representative of Lesotho stated that HIV/AIDS was one of the major problems affecting his country and others in the continent. Due to limited resources these countries were not able to cope with these problems, especially soil erosion due to the mountainous topography of his country. They needed external assistance to address these problems. The representative thought that such assistance would have the additional benefit of contributing to the generation of employment. He believed that despite the fact that Lesotho was a poor mountainous country, it had a great potential for developing a viable tourist

industry, given appropriate development assistance. He called for a clear statement on the definition of small states in the Task Force Report.

The Representative of Cape Verde referred to the per capita GNP criterion used in measuring development. He highlighted problems faced by his country and others in the Sahel. He pointed out that his country could not develop without additional concessional funding. Other problems faced by countries in the region included high indebtedness and the transition from a one-party state to a multiparty democracy. He stated that ecological problems contributed to food insecurity and social problems in the Sahel states. He acknowledged the need for countries to implement economic reforms but pointed out that this should be supported by adequate funds.

The Representative of Swaziland supported the views expressed by the delegate of Lesotho. He stated that vulnerability concerns had been raised with the World Bank and WTO. There was an urgent need for them to address this problem and help these countries.

The Representative of Gabon thought that it would be unfortunate if the 1.5 million criterion used for classifying small states was overemphasised because it would exclude many other countries which shared similar problems. In his view, all developing countries were vulnerable.

The Representative of Malta emphasised the need for capacity-building in small states. He noted that many such states had no universities and it would be useful to pool resources for higher education. There was too much emphasis on volatility of incomes in the work of the Task Force. The emphasis should be on environmental vulnerability.

The group stressed the importance of the following issues for African small states:

- Indebtedness was a critical problem that needed to be addressed comprehensively.
- Tourism provided opportunities but there were concerns about its impact on the environment.
- Defining size using population and per capita income had shortcomings.
- Vulnerability arising from environmental concerns should be covered by the Index.
- Capacity-building, including pooling of resources for higher education, was critical for the future development of African small states.

High priority should be given to addressing HIV/AIDS to enable small states to retain a viable human resource capacity.

(b) Caribbean Region

This session was chaired by **Mr Neville Nicholls**, President of the Caribbean Development Bank, and the rapporteur was Mr Byron Blake, Assistant Secretary-General, CARICOM.

The Chairperson indicated that discussions should concentrate on ways of reducing vulnerability, insurance to cover catastrophic risks, building and sharing capacity at the regional level and transportation. The Group should make some concrete proposals for the consideration of the plenary session. He said that the paper prepared by the World Bank on commodity risk management had focused on theoretical aspects, and the group should bring out the practical aspects of how small producers would be affected.

The Representative of Antigua and Barbuda said that the Task Force should also address the issue of the movement of ships bearing nuclear waste through the Caribbean Sea. He indicated that it was not clear who was paying for the insurance of such ships, the nature of the insurance coverage and who benefited from the cover. More information should be gathered on this issue.

The Representative of Cayman Islands, commenting on the UN obligations concerning insurance of ships carrying toxic waste, suggested that this matter should be referred to that body.

The Representative of Guyana was concerned with catastrophe insurance. He stated that the timetable for implementing the proposals made in John Pollner's paper 'Managing Catastrophic Disaster Risks Using Alternative Risk Financing and Pooled Insurance Structures' should have emphasised their operational feasibility with some consideration of catastrophe insurance. In terms of commodity risk management, he suggested that a study should be made of just one commodity in one country over a six-month period, rather than 4–6 studies in three months. He felt that a single case-study should be conducted as a confidence-building measure.

The Representative of the Caribbean Regional Negotiating Machinery said that the World Bank paper on commodity risk management did not address portfolio management decisions of financial institutions. He said that the interface with creditworthiness was very important and that even when lending fundamentals were met, smallness had an impact on decisions made by these institutions. The speaker pointed out that the paper on commodity risk management did not address the issue of who accepted the credit risk. In his view, coverage should be on price risk and not quantity risk.

The Representative of Guyana sought clarification on whether the proposal in John Pollner's paper (item (f)) would be the ideal way of addressing the problems of small farmers and he quoted: 'in exchange for the Government's directing of multilateral institution proceeds to help fund the pool, the premiums collected for the pool would be assessed as a minor charge/levy which would be paid into a separate trust fund for future disaster financing of low income households and crop damage to small farmers who were uninsured'.

In response, **Mr John Pollner**, World Bank, indicated that this option would only take place once such a fund had achieved significant surplus status since the 'insurance' for low income sectors would need to be initially subsidised until such communities could begin affording insurance. Other mechanisms would also be explored to cover this sector.

The Representative of CARICOM pointed out that there was a need to link the paper on insurance mechanisms to regional integration to ensure that everything was seen as a package. The inadequate capacity of the local insurance industry was one element of the problem; mitigation and preparedness was another. He pointed out that there was need to define what was meant by capacity to deal with catastrophes, and then to identify what kind of capacity was required.

The Representative of the Inter-American Development Bank (IDB) indicated that the Caribbean region needed more technical skills in vulnerability assessment and mapping. This would help in formulating appropriate preparedness plans and interventions. Though there had been embryonic initiatives to build the needed skills, the representative wished to see a core programme to address human resources problems in these areas.

The Representative of the Caribbean Regional Negotiating Machinery said that identifying and building regional private-sector entities was an important area which could enhance competitiveness. Outside the tourism and financial services sectors, service industries were not well organised in the Caribbean. Legislative instruments might not be adequate to resolve this problem, and the guiding hand of the state might be needed to capture opportunities in outsourcing and in helping industries to develop strategic alliances. The representative also noted that political vulnerability existed and, therefore, there was a need for a wider definition of vulnerability.

The Representative of the Eastern Caribbean Central Bank (ECCB) agreed with the point on political vulnerability raised by the previous speaker. Good recent examples were the use of 'political advisory' notes issued by some governments discouraging their nationals from travelling to some tourist destinations and the use of offshore financial centres.

The Representative of the OECS emphasised the need to achieve enterprise development and business networks in the region. He said that regional arrangements needed to be viewed in the context of globalisation.

The Representative of Antigua and Barbuda pointed out that the region should establish its own tourist offices in tourist markets to promote the potential of the region.

The Representative of the ECCB noted that much of the money which flowed into the Caribbean hotel industry leaked out to the benefit of international tour operators. In view of this, there was a need to promote Caribbean-owned tour operators. The private sector should be mobilised for this purpose, but transport and immigration arrangements were key issues that needed to be addressed in this connection. The region should have an air transport policy, to facilitate freer movement of tourists within the region, and remove all the impediments that limited business development. He also pointed out that the region should be more active in multilateral financial negotiations as they were in multilateral trade negotiations.

The Prime Minister of Barbados indicated that there was need to develop a

framework in order to capture various elements of capacity-building to overcome vulnerability. In his view, capacity-building at regional level should include: (1) increased institutional capacity to enhance potential for international bargaining; and (2) additional capacity in the area of the marine environment.

He pointed out that attention should be given to the identification of what needed to be done in order to sharpen the use of regional capacity. To address the problem of regional positioning, regional secretariats needed to be strengthened. The Prime Minister indicated that the region would like to see a copy of the report of the Task Force before it was presented to the World Bank's Board of Directors.

The meeting concluded with the rapporteur summarising the discussion of the Group.

On capacity-building, the needs were:

- to counter disasters;
- to neutralise international threats;
- to ensure protection and management of Caribbean marine resources;
- for the management of the integration process;
- to facilitate private sector alliances and networks;
- to set up regional capital markets; and
- for operating in a technology driven environment.

On disaster insurance and commodity risk management, the main issues were:

- whether insurance covered the shipment of toxic material across the Caribbean sea;
- catastrophe insurance, to be a part of a package of measures;
- on commodity risk, the need to identify the important areas for the Caribbean and develop more practical arrangements.

On transportation, the priority issue to be addressed was competitiveness. More work was needed in this area.

(c) The Pacific Region

This meeting was chaired by **Mr Noel Levi**, Secretary-General, South Pacific Forum Secretariat and Ambassador Neroni Slade was the Rapporteur. The main points of the discussion were as follows:

On disaster insurance:

The World Bank's Caribbean initiative was of interest to the region: there should be study of the possibility of replicating this scheme in the Pacific. In the meantime, with reference to the type of scheme envisaged for the Caribbean, queries raised included:

- whether there would be provision for covering property interests of village communities, especially traditional land owners;
- the coverage for agricultural produce, and implications for an economy largely dependent on agriculture;
- implications for very small isolated economies highly dependent on shipping;
- the extent to which the private sector would be realistically engaged in high risk events (or at what cost i.e. premiums), often considered as 'acts of god', such as volcanic eruption;
- the need to consider the catastrophe insurance proposal in terms of the continuance of risk management, including support for disaster preparedness and management.

On capacity-building, the Group highlighted the following issues:

- the strengthening links between knowledge institutions and sharing of information at all levels, including traditional groupings;
- the promotion of regional co-operation/integration, which allowed for strong interaction and sharing of experiences – allowing for learning from each other;
- the need to recognise that regional approaches were more optimal in tackling problems of duplication;
- the need to promote modern technology in capacity-building – perhaps use of SIDS/Net;
- the need to strengthen sound environmental management, to promote trade/commodity development and for reducing vulnerability in the Pacific region.

On commodities, issues of interest to the Pacific included:

- the need for flexibility on the development of approaches to commodity risk management and the fact that solutions by the International Task Force on Commodities might not be replicable in all countries
- the need for International Commodity Task Force to study other commodities such as coffee, which was important for PNG;
- concern about risks and possible abuse of commodity markets through speculative activity, with implications for both volume and income risks;
- the possibility that, at least for those Pacific countries covered by the ACP, Lomé arrangements such as SYSMIN and STABEX, could be used to the extent of their applicability;
- the crucial importance of minimising income risks;
- the fact that markets were unlikely to be favourable (or 'go as deep') as government or multilateral schemes.

Fourth Plenary Session: Reports of the Three Regional Groups

This session was chaired by **Dame Veronica Sutherland**, Deputy Secretary-General, Commonwealth Secretariat. She invited the three Rapporteurs to present their reports of the regional break-out sessions, starting with Africa to be followed by the Caribbean and the Pacific.

(a) Africa

The Rt Hon Rajkeswur Purryag, Deputy Prime Minister of Mauritius and the Rapporteur of the session, presented the report of the Africa regional break-out session to the plenary. He said that during the course of the discussion, the following main points emerged:

- The problem of debt affected a number of African states and the group proposed that debt relief under HIPC should also be extended to these vulnerable small states.
- Tourism was considered important to the development of a number of vulnerable states. It was agreed that further development of this industry was vital to transform these economies, including landlocked ones. However, environmental issues, especially soil erosion, should be taken into account in developing tourism.
- Small states were particularly prone to soil erosion and environmental degradation and the group proposed that more emphasis should be given to the development of environmental indicators in the construction of the Vulnerability Index which, it was argued, at present emphasised economic aspects.

Capacity-building was vital and in this respect it was proposed that consideration be given to the pooling of resources particularly in the educational sector, especially higher education. The problem of food security was particularly acute in African small states and, therefore, the group proposed that this issue should be addressed by the Task Force.

Some representatives were concerned about defining small states purely on the basis of population. There was a need to clarify this issue in the Report of the Task Force, especially in view of possible graduation of countries from the Commonwealth category of small states. The Group had proposed that there was a need for international organisations to recognise small states as a special category. In this respect, it was indicated that GNP per capita should not be taken as the only criterion to access resources of international financial institutions. There was a need to consider other criteria such as vulnerability indicators.

(b) Caribbean

Mr Bryon Blake, Assistant Secretary-General, CARICOM, presented the report of the Caribbean regional group to the plenary session. In his presentation, Mr Blake said that this group focussed on three areas:

- capacity-building and strengthening;
- insurance: catastrophe and commodity risk management;
- transportation.

The Caribbean group felt that capacity-building and strengthening was a critical priority in both the public and private sectors.

At the public sector level, additional capacity was needed:

- to counter the impacts of natural phenomena which could lead to disasters;
- to undertake vulnerability assessment and measures to ensure disaster preparedness, response and planning;
- to neutralise external shocks/threats;
- to support international negotiations;
- for the protection and management of the Caribbean sea and the marine economy;
- to support the management of the integration process;
- to provide common services and strengthen functional co-operation.

These interventions should be built on the successful experience to date in areas such as tertiary level education and training, research and health services.

At the private sector level capacity was required:

- to facilitate/stimulate the building of regional enterprises and the creation of regional and international alliances;
- to provide/develop human resources for operating in a technology driven international environment;
- for building capital markets;
- for advocacy and negotiations.

Turning to the discussion on insurance, Mr Blake said that the Caribbean region welcomed the World Bank proposals on catastrophe insurance. But he reiterated that this should be one element of a package of measures needed to overcome the problem. The other elements should be identified in the Task Force report. On insurance against risks posed by the transport of nuclear materials and waste, there was a need to consult with relevant UN agencies.

Mr Blake said that the Caribbean group had expressed its concern about commodity price/supply volatility. In this context, it welcomed the Bank's report on commodity risk management. However, it needed to address, *inter alia*, the following:

- the need to deepen the analysis and develop more practical alternatives;
- the nature of operation/operators and of products in small states, including services;

- the need to assess the adequacy of crop insurance.

Turning to transportation, Mr Blake stressed that both Maritime and Air were major concerns of the Caribbean. Providers of these services were faced with complex problems including relatively high costs. Some of these problems had tended to impede the integration process in this sector. There was a need to analyse this issue more comprehensively before proposing solutions.

(c) Pacific

Ambassador Neroni Slade, Permanent Representative of Samoa to the United Nations, New York, presented the report of the Pacific regional break-out session. He said that discussions in this group covered three main areas:

- disaster insurance;
- commodity risk management;
- capacity-building.

Disaster Insurance

While the Caribbean initiative would be of relevance to the Pacific, it was wiser for the Pacific to wait and see its outcome. However, they had several concerns:

- Would such insurance offer cover for agricultural commodities on which Pacific economies were largely dependent?
- Would such a scheme provide cover for villagers' property as well as state property?
- Would such insurance cover 'Acts of God' (for example volcanic eruption, etc)?

The Task Force Report should emphasise the differences in the impact of natural disaster occurring in a large state (where insurance companies can spread risks across a larger space) and one affecting a small state. Natural disasters should be viewed as a natural process that characterised vulnerability. The issue was to build capacity to mitigate the impact of natural processes and thereby lower the need for insurance, or at least lower insurance premiums.

Commodity Risk Management (CRM)

Concern was expressed about income risk, and not just price risk as indicated in the report on Commodity Risk Management. A serious limitation of the proposed market-based CRM instrument was that it ignored the impact of fluctuations in supply, which often resulted from natural disasters. It was difficult to see how market-based instruments would substitute for interventions that up until now had largely been in the realm of intergovernmental arrangements.

The introduction of such instruments would lead rural communities to believe that third parties effectively endorsed all their risks. This could induce them to abandon their indigenous risk management techniques, for example crop diversification. The group emphasised the role of diversification in mitigating impacts of

exogenous shocks. In addition to diversification, countries must get out of commodity dependency altogether and build capacity for downstream processing. The idea and relevance of test cases or pilot schemes was questioned. The specificity of each small state may defy replication of a 'Prototype' approach. A wider range of commodities could be looked into (for example coffee). The group was concerned about the risk involved in market-based CRM schemes, especially possible speculative behaviour of some market participants. It was recognised that market solutions existed for some commodities (for example the gold futures market), and that there would need to be a blend of market and non-market measures.

Capacity-Building

Regional 'Knowledge Institutions' had proved to be useful tools for capacity-building. Links between them should be strengthened.

Regional co-operation and integration provided opportunities to learn from each other and it enabled the resolution of recurrent problems such as duplication of approaches.

Modern technology had a vital role to play in capacity-building, particularly in the Pacific, where it would enable countries to communicate more cheaply.

The importance of capacity-building for undertaking sound environmental practices was stressed as a means of reducing vulnerability in the Pacific.

Day Two, Friday, 18 February

Fifth Plenary Session: Transition to the New Trade Regime

Sir Shridath Ramphal chaired this session. In his introduction, Sir Shridath said that the main objectives of the session were to examine the issues of transition, the loss of trade preferences and the new trade regime, and fiscal implications of trade liberation. He added that the session included three presentations to facilitate discussion and then invited Dr Roman Grynberg, the first presenter, to make his intervention.

Dr Grynberg, Multilateral Trader Advisor, South Pacific Forum Secretariat, in his introduction, illustrated the experiences of the countries in the South Pacific in accession negotiations with the World Trade Organisation (WTO) with the example of Vanuatu. The accession process had been problematic for the three Pacific countries, Samoa, Tonga and Vanuatu, which were currently engaged in accession negotiations with the WTO. Vanuatu, for example, had spent five years in negotiations with the WTO but continued to come up against conditions imposed by the USA, which were damaging to its interests. While Vanuatu had agreed to considerable tariff reductions or elimination, it could not agree to the opening of certain sectors such as telecommunications, which was a requirement imposed by the USA at these negotiations. The accession process for small states was, therefore, inherently flawed and gave rise to extremely long delays, not to mention high financial costs.

He then turned to a brief enumeration of the challenges faced by Pacific small states in other areas of the WTO. A key issue was how special and differential treatment in the WTO could be negotiated, to exempt small states from the impact of the liberalisation process. Another issue was that several states in the Pacific had benefited from the Lomé Convention and other preferential trade agreements, most notably with Australia and New Zealand. Governments were concerned that as these agreements were being phased out, the incentive to locate investments in the small island states of the Pacific would also disappear.

A further area of concern was fisheries subsidies: these had mainly benefited the Atlantic fleets but they were now moving into the Pacific. This had adverse impact on environmental substainability in the Pacific. For instance, the US fishing fleets in the Pacific were heavily subsidised by the US AID which reimbursed about 80 per cent of costs. This encroachment on Pacific fish stocks undermined the Pacific States' capacity to generate income: for example, 40 per cent of Kiribati's and Tuvalu's income arose from fisheries access agreements.

Turning to institutional issues, Dr Grynberg said that now there was greater recognition among small states of the need to work together in their dealings with the WTO. A meeting will be convened in London in May between the Secretariats of the Indian Ocean Commission, the South Pacific Forum and CARICOM to establish a small states alliance, which would reinforce their collective interests within the WTO. A priority issue to be pursued by this alliance was the need to establish a small states programme in the WTO.

In his presentation, **Mr Sam Laird**, Senior Counsellor, WTO, stated that the purpose of his intervention was to brief the meeting about WTO actions on small states issues. He welcomed the conclusion on this subject in the interim report of the Task Force.

First of all, he wanted to dispel the idea that there was global free trade. This was not so and there were still many sectors of high tariffs, and in some countries, there was tariff escalation, especially on some developing countries exports. Research pointed to the need for further liberalisation in agriculture, in manufactures and in services. Developing countries would benefit significantly from further trade liberalisation. The bias against developing country exports was not confined to industrialised countries but was to be seen in tariffs imposed by developing countries with high levels of income (GDP).

These anomalies had resulted from peculiar modalities of WTO operations. The organisation worked largely through negotiations on the liberalisation side, including rule making and dispute settlement. All these required consensus and agreements were not usually reached on the basis of one member one vote: on the contrary, it was more a matter of one member one veto. Through the veto, any member can block any part of the negotiations process and it was not clear how these modalities would be reformed in the context of enlargement of the WTO.

Explaining the attitude of the WTO towards small states, Mr Laird said that in the period preceding the Seattle meeting, there was a great deal of sympathy about the vulnerability of small states and indeed this was reflected in the final

draft considered at Seattle. The issue was still on the agenda of the WTO Committee on Trade and Development. A meeting of this Committee was scheduled for 10 March, and it would discuss the small states work programme. A seminar was scheduled for June to further consider small states issues. Finally, Mike Moore, Director-General of the WTO, would be visiting the Commonwealth Secretariat in the beginning of March and he was expected to discuss possible collaboration with the Secretariat. There were, therefore, several avenues through which the case for small states could be pressed.

Turning to CARICOM comments on the interim report, Mr Laird appreciated its specific proposals on special recognition for small states. One concern he had on that comment was a plea for exemption of services from WTO commitments. Services were often inputs into manufactures and traditional exports: thus if a country allowed services to diverge from world prices then its competitiveness would be eroded in other areas as well. On the CARICOM proposal of 'best endeavours', it was better to seek legally binding commitments rather than platitudes.

The CARICOM paper also highlighted balance of payments problems and the right to use safeguards for those reasons. Mr Laird said that this was consistent with WTO rules but it was well known that the real source of balance of payments problems was the domestic deficit, and taking QRs or import restrictions did not solve the problem but just delayed the solution. The right to longer timetables for implementation was a very legitimate claim under certain circumstances but this should not be simply a tactic for delaying implementation of WTO agreements. Mr Laird reiterated that foreign investors would choose where to invest on the basis of which state had implemented rules, rather than which one was still considering implementation.

In conclusion, Mr Laird said that he appreciated CARICOM comments on the WTO issues faced by small states but urged the meeting to respond to these challenges with practical solutions.

In his presentation, **Mr Liam Ebrill**, Assistant Director, IMF, said that he was glad of the opportunity provided to the Fund to present the findings of its research on revenue implications of trade liberalisation, in general, and the implications for small economies.

Mr Ebrill explained the current research programme of the Fund on fiscal matters. Two of these were relevant to this Conference: first, the paper on revenue implications of trade liberalisation; and the second study, yet to be completed, was on Value Added Tax. Though both studies were applicable to all developing countries, there were some lessons to be drawn by small economies.

There was a general belief that trade liberalisation resulted in the loss of customs revenue. However, the Fund research indicated that, in many countries, this was not the case for two reasons: first, many tariffs has been set at prohibitive levels, which were above revenue maximising levels. In such instances, trade liberalisation had contributed to increased revenue. Secondly, tariffication of quotas as a part of trade liberalisation process had also led to revenue increases. Over the

longer term, the association between trade liberalisation and more rapid economic growth will further bolster revenues for a given level of tariff.

In any event, genuine trade liberalisation would eventually result in reduced trade tax revenues and, hence, would raise difficult fiscal issues, unless appropriate steps were taken to strengthen the domestic tax system. The IMF was working on identifying a set of best practices and had found that VAT was an appropriate tax instrument. This tax allowed a state to have a relatively high threshold and therefore little revenue was lost by exempting small traders. This facilitated the administration of tax. Another tax which was encouraged by the Fund was the adoption of personal income tax with a few brackets and a moderate top marginal rate. Some form of presumptive taxes could also be utilised. The IMF also advocated tax and customs administration reform, and this should include modernisation of systems and procedures. Simplification of tax and tariff systems was a prerequisite for administrative reform.

Mr Ebrill recognised that while VAT was seen as a good tax, there was concern in very small states about their capacity to implement such a tax. They had found that in a more open economy, it could be easier to tax imports than consumption as a whole due to significant domestic tax administration problems. It was, therefore, relevant to consider the structure of the economy, the role of domestic production and the kind of administrative capability available when considering whether to introduce a VAT or some alternative regime. In some cases a retail sales tax, supplemented by excise taxes on a narrow range of goods were more suitable. Alternatively, if the country relied on tourism, a hotel room tax might be part of the answer.

In conclusion, Mr Ebrill said that both import tariffs and VAT might be similar but they sent out different signals. Since trade taxes discriminated against imports, VAT might be a better long-term policy option.

The Chairperson thanked the three speakers and invited comments from the floor.

The Representative of Grenada commented on the observation made by one of the presenters that a technocratic case had to be made for small states. In his view, this had been made over the past 20 years. Notwithstanding, policies by international financial institutions were influenced by theoretical paradigms. Regarding special provisions for SMEs by the WTO, he believed that the needs of the very small suppliers had to be taken into account. The rationale for according special treatment for SMEs had been accepted – they suffered from higher rates of income volatility and the new trade rules should aim to mitigate and not exacerbate such volatility. He emphasised that small states were seeking special and differential treatment only in terms of critical transition problems, and more specifically on the timetable for implementing WTO trade liberalisation and related provisions.

The Representative of CARICOM said that the work programme of the WTO needed to incorporate the problems of SIDs and small states. Special and differential treatment or defensive measures were necessitated by the politics of developed countries. He wondered where the level playing field had been pitched. In

the OECD's project on harmful tax competition, countries with low levels of taxation were being asked to raise taxes to the level prevailing in developed countries. In the case of trade related taxes, which were higher in developing countries, the emphasis was on lowering them to levels prevailing in developed countries. Therefore, developing countries were constantly bearing the cost of adjusting to what the developed countries had declared to be the level playing field.

He also said that the WTO needed a fundamental review of the current process of accession as it affected small states and the associated costs for these countries.

The Prime Minister of Barbados briefly described his experience in substituting a fiscal regime, which had 11 different taxes, to broad-based consumption taxes. No doubt, there had been political difficulties to overcome with risks of losing major sources of revenue. However, as small states moved to more service-based economies, they would need to adopt broader-based consumption taxes. The system of VAT also allowed a paper trail, which facilitated income tax administration. Therefore, based on his country's experience, he was prepared to endorse the IMF proposal on VAT. On the issue of special and differential treatment for small vulnerable states vis-à-vis what was extended for LDCs living in abject poverty, his view was that it was not an equal situation and therefore would be inappropriate. Small and vulnerable states that were not LDCs were not calling for equal treatment. Many such states had achieved a high rating on the human development index, which made claims for equality ludicrous. However, their particular vulnerability should be recognised as justifying special consideration to deal with crucial areas of transformation of their economies as the global process of trade liberalisation continued.

The Representative of Vanuatu observed that with the collapse of the Seattle trade talks, there was a need to move away from the focus on trade, and pay greater attention to economic and social measures, especially local market conditions and issues such as land reform. Trade, in any event, raised wider issues. He also suggested that agreement on special and differential treatment for small and vulnerable states in trade, investment and finance could be used to secure preferential access to markets. In his view, this would facilitate a greater flow of foreign investment to these countries.

A Representative of the Advisory Board to the Task Force said that the aim of the IMF study seemed to be to provide a picture to policy makers on revenue implications of trade liberalisation, as the revenue earned on customs duties constituted a large proportion of tax collection in small states. It had proposed that countries should move away from trade taxes and adopt a consumption tax such as VAT. In his view, the proposal did not deal with the basic problem facing small and vulnerable states, i.e. the lack of viable alternative sources. This fundamental issue would hinder efforts by these countries to liberalise trade.

The Representative of the South Pacific Forum Secretariat observed that the process of securing accession to WTO was being used by some member countries to extract maximum concessions from applicants, for example the case of Vanuatu. The Trade Policy Review in the WTO, while useful as a transparent

exercise, had another more problematic side for small and vulnerable states – it had a normative message that there existed an ideal 'best practice' model of trade policy against which WTO members were judged. He commented that Seattle had prompted the formation of a SIDS alliance and he felt that the effort to re-establish the global alliance of small island states was now all the more vital. There was also a critical need to have a physical presence in Geneva where small states were poorly represented.

The Representative of the OECD remarked that she had appreciated the diversity of views expressed the previous day on the issue of harmful tax competition. She acknowledged that the relationship between the OECD and some of the offshore financial centres had started badly. However, she believed that there remained the chance for a satisfactory outcome of its project. Caribbean countries had been seeking a multilateral forum for discussions with the OECD and the form of such a forum would need to be worked out. She agreed that there was need for better understanding on both sides. The OECD was not trying to impose a uniform tax regime on non-member countries but to ensure that there was an effective exchange of information. She acknowledged the need to study the economic impact of the proposed measures and was proposing to meet in early May with aid agencies under the auspices of the DAC.

The Representative of Antigua and Barbuda welcomed the OECD statement and said that it was never too late to make up for past mistakes. He welcomed the opportunity for a sensible, consultative policy dialogue, which would look for solutions to problems between countries that were not considered as unequal. He moved for the multilateralisation of the dialogue on tax regulations for offshore financial services. Responding to the submission of the representative of France on the previous day, he wished to dissociate the issue of tax from money laundering, which appeared to be a far more chronic problem in the OECD that in small states. He submitted that there was more money laundering undertaken in each OECD capital than in the entire Caribbean region. Speaking on the issue of expanding and diversifying the tax base away from a dependence on import tariffs and customs taxes, he said that Antigua did not have the requisite capacity to administer VAT type taxes as there was a limited pool of trained personnel. He asked the IMF to include in its programmes components to develop institutional capacity for administration of complex taxes in small states. On the issue of special and differential treatment for small states, he agreed with the Prime Minister of Barbados that Caribbean countries could not claim equal treatment with LDCs on account of much better standards of living. The Caribbean countries required special and differential treatment of a different nature, as they were primarily service- and not goods-based economies. Three things on which Antigua was keen to seek special treatment were:

- The link between natural disasters and ability to repay debt;
- Access to concessionary finance for post-disaster rebuilding from International Financial Institutions, regardless of the income of the country;
- Technical assistance for coping with natural disasters.

The Representative of the European Union emphasised the connection between development, trade, structural adjustment and liberalisation and prescribed a holistic development approach that linked all these issues. The EU/ACP Economic Partnership Agreement was a new approach, which would combine liberalisation at the regional and global levels to make ACP countries more competitive and better integrated into the global market. He highlighted the need for all donors to undertake a similar holistic approach in assisting small states.

The Representative of Malta shared the experience of his country in implementing a radical overhaul of its financial and revenue systems. He said that until recently Malta was an economy which did not believe in credit or banking transactions. His government had been successful in instilling a sense of trust in the people to overcome this mistrust of credit with the result that it was now an economy where the ratio of cash to credit was 1:9 compared to 1:1 previously. Similarly, customs and excise duty used to be the primary revenue generators (together they contributed to 45 per cent of revenues), followed by social security payments (40 per cent). However, due to the Uruguay Round, Malta had to dismantle its tariff regime and shift to a VAT. Despite initial opposition, the government was able to institute this reform within two months when it was voted into power for a second time – altogether it took five years to implement the VAT fully. VAT had become a good source of revenue and effective in circumventing loss of tariff on smuggled goods. His government had also reduced income tax rates to almost half of initial rates with the result that income tax collection doubled within two years. However, tax forms were kept as simple as possible and reduced to four pages to simplify procedures. A withholding tax was levied on all bank deposits, which made redundant the need for inclusion of information on shares and interest on income in tax forms.

The Representative of the UNDP gave an assurance of his organisation's support for economic diversification, enhanced competitiveness and institution building within small states and enumerated a number of programmes and projects that the UNDP had undertaken.

The Representative of Trinidad and Tobago underscored the importance of the integration of small vulnerable states (SVS) into the world economy. She felt however that such integration would be facilitated by assuring them a greater degree of secure market access. She submitted that market access would be a far more effective instrument in development and global integration than attracting investment from the IFC and the World Bank. Market access would lead to the necessary external investment. She stated that the SVSs were highly specialised economies and the process of diversification would have high transition costs. To facilitate the transition, she asked for protection in the form of waivers from WTO. She also stressed the importance of finding a mutually acceptable definition of small states for purposes of WTO negotiations. The WTO's small states definition was based on the percentage of world trade and this did not capture vulnerability. Finally, she made a case for export subsidies where these were used to encourage small domestic firms, which faced high entry and marketing costs in trying to penetrate overseas markets.

The Representative of the IMF considered the intervention of the Prime Minister of Barbados to be very important and stated that the IMF supported his views. He said that Barbados' success with VAT had encouraged the Fund to try it elsewhere and the experience of Malta was also a very enlightening one. Responding to the concern expressed by the Representative of Antigua, he clarified that the IMF did offer limited technical assistance for capacity building in tax administration.

The Representative of Canada reinforced the argument of the Prime Minister of Barbados that there should be a move away from lumping together SVSs with LDCs and that there was a need to be specific about the special measures being sought for them. He also made a comment about working with IFIs to encourage private investment in these states. He said that the private sector did not necessarily see greater risk factors in investing in SVSs and a continued flow of ODA might encourage it to invest in small states. He was also encouraged to learn from the IMF representative's presentation that the Fund recognised the link between tax policy and tax administration. He stressed the need for capacity building to facilitate tax administration with shifts in tax policy. He also recognised the importance of the strong political dimension of shifting attitudes in society towards tax reform and asked for these to be accommodated in programmes for SVSs in the interest of country ownership of the development agenda.

Sixth Plenary Session: Globalisation and Small States

This session was chaired by **HRH Prince Lavaka 'Ulukalala Ata**, Prime Minister of Tonga. The Chairperson opened the session with a brief statement. In his view, the issue of vulnerability of small states had been well addressed in the interim report of the Task Force and the background papers. The Prime Minister shared the views raised in the CARICOM review of the interim report. He acknowledged that though small states shared similar characteristics, there was considerable diversity among these countries. For instance, there was no social and political homogeneity between small island states in the Pacific and those in the Caribbean. Even the definition of small states by a single population threshold was not appropriate given the diversity of countries falling within such a group. In the Pacific small islands, the biggest constraint for development was their limited capacity to compete internationally. The Prime Minister concluded his statement by calling for international recognition of small states as a special category in the context of their vulnerability. He then asked Sir Alister McIntyre to make his presentation on issues concerning globalisation.

In his presentation, **Sir Alister MacIntyre** noted that while the concept of a global economy implied free movement of goods, labour and services, only a partial model operated at present which excluded the free movement of labour. This, he said, was especially problematic when developing a strong service sector as was the case with many small states. Strong forces of xenophobia and racism prevented countries from competing in particular labour markets. Those countries that advocated core labour standards must show a commitment to improve the movement of labour. On trade in goods and services, Sir Alister said that small states would await post-Seattle development before considering whether

they could progress on the debate on special and differential treatment in the WTO. For small states and least developed countries in general, Sir Alister advocated an 'early harvest' approach to trade negotiations, paying special attention to the development of non-traditional exports. He said the link between global and regional trade integration should be recognised, especially as the latter was often seen as a learning process for the former.

There was a mistaken view that small states were not affected by financial instability. Sir Alister felt that the impact of such instability was fed through to these economies in the form of lower commodity prices and tourism revenues. There was a tendency for multilateral institutions to consider only situations of financial instability where they believed there would be systemic effects. While this was not the case in small states, their concerns still warranted consideration.

On aid, Sir Alister hoped that all donor countries were still committed to a growth in ODA. He said that the idea of graduating small states on the basis of GDP per capita criterion alone was an unsound approach. In closing, Sir Alister noted that small states and least developed countries had suffered a setback in the race to a knowledge economy as history had left them with a skewed achievement in educational attainment. In looking at the future, small states needed more ODA and more technical assistance, in order to transform their countries into knowledge-based economies.

The Chairperson thanked Sir Alister for his outline of small states' issues related to globalisation, and asked Mr Kimberly to make his presentation on exploiting information technologies for electronic commerce and better public sector management.

Mr Paul Kimberly spoke on his own behalf, and that of Robert Schware, as the co-authors of the conference document 'Exploiting Information Technologies for Electronic Commerce and Better Public Sector Mangement'. He hoped he could set the agenda for small states' discussions on information issues, and outlined four points:

- Technology was now so cheap that it was possible, at any level (regional, country, industry, firm, individual), to leap-frog the costs of investment in R&D that industrial countries had made.
- Up to now the costs and availability of telecommunications had been a barrier to take-up of the technologies, but technology was making telecommunications themselves cheaper.
- In Charles Darwin's words: 'it is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change'. This was particularly important in electronic commerce.
- The new technologies presented unprecedented opportunities.

Mr Kimberly briefly defined what was meant by information technologies (IT) and electronic commerce (EC): hardware, software and human resources. So far, the technologies had been used to improve administrative systems, but e-commerce

had changed all of that. The technologies now allowed for traded goods to be declared electronically which speeded up the whole trading process. The Internet could be used for government-to-government transactions, including payments, and could improve information flows without the need to establish expensive networks. Its applications would impact on: the global supply chain, supply/demand chain efficiencies, port efficiencies, trade efficiencies, tourism, agriculture, e-government, horticulture, textiles and apparel, new industries (including e-businesses), trading partners, local skills, employment, the tax base and participation.

In terms of IT development, the first step was to identify what talent was available to a country, including its expatriate communities. The World Bank had a programme which could help small states to assess their preparedness for electronic commerce. He also advocated the use of buddy systems or special relationships between technology partners and small states to help incubate initiatives. Countries needed to establish connections, for which many options were now available. He suggested that they look at virtual free-trade zones, virtual government systems and regional hubbing.

In summary, Mr Kimberly suggested several policies for adoption by countries. These were:

- establish their preparedness for e-commerce;
- develop a reform agenda which was adapted to the local environment;
- consider 'buddy systems' and incubators;
- consider virtual trade zones for IT and e-commerce;
- target expatriate for trade opportunities and repatriated skills;
- encourage 'tiger teams' to implement key pilots and make this part of international aid assistance.

Mr Kimberly stressed that the technologies were not too expensive, and countries needed to adapt and make the best use of available opportunities.

The Chairperson thanked the speaker and opened the floor for discussion.

The Representative of Dominica invited the international community to acknowledge the specificity of small states' problems and to adopt a more flexible approach in assisting this group of countries to integrate their economies into the global economy. While globalisation brings along new opportunities (such as organic farming and eco-tourism for Dominica), it also created challenges. In his view, therefore, there should be an adequate transition period. For instance, the liberalisation of the banana trade, without an adequate transition period, dislocated the economy and threatened social cohesion in his country.

The Representative of St. Lucia questioned the net benefits from new sectors being developed to replace the traditional agricultural activities in the Caribbean. A large share of the proceeds from tourism actually leaked out of the economy through the package deals and the high import content of the sector but, in con-

trast, 'banana money' goes mainly to the producers. Investing in modern information technology could be a better alternative, but poor small states should be provided with special assistance to acquire the technology and to develop the needed skills. The developed countries must renew their pledge to commit 0.7 per cent of their GNP to ODA.

Commenting on Sir Alister McIntyre's reference to the effects of the Asian Financial Crisis on small states, the **Representative of Antigua and Barbuda** drew attention to Asian investments that had been postponed or cancelled as a result of the crisis. For instance, Antigua's new Five-Year Plan was largely based on a substantial tourism development project funded by Malaysian investors. In the wake of the crisis, this investment had been postponed. Turning to new information technology, the representative said that it certainly offered opportunities to small states, especially those that had an educated and computer-literate labour force. But given that the level of investment on equipment required in the telecommunications field was practically the same for both small and large states, there should be other means to attract investors. In this context, full liberalisation would not be appropriate: a given company would have little incentive to incur the high cost of infrastructure development and then see the benefits reaped by a competitor. The situation of France Telecom in Vanuatu cited earlier clearly demonstrated this problem.

The Representative of the European Investment Bank pointed out that the EU had devised an Investment Facility to assist ACP countries in exploiting new opportunities offered by globalisation. This facility, to be set up by the EU in the context of the post-Lomé arrangements, would provide loans and risk capital to ACP public and private sectors. It would operate on the basis of a revolving fund. While continuing to work through local ACP intermediaries to reach clients, the EIB, which will manage this facility, would seek to work through regional institutions as well.

The Representative of Cape Verde underlined the importance of IT for the competitiveness of small states. Acquisition of such technologies raised the issue of conditions of financing. The criterion used by ODA agencies (for example GDP per capita) discriminated against small states. Whilst small states had no choice but to integrate their economies into the globalisation process, its adverse effects had a disproportionate impact on them. Thus, small states often suffered from balance of payment disequilibria due to exogenous factors. To counteract such effects, they should devise means of attracting FDI and be granted greater market access by developed countries.

The Chairperson thanked the discussants and adjourned the meeting for lunch.

After lunch, the Conference broke into four thematic groups on the basis of its agenda: (1) tackling volatility, vulnerability and natural disasters; (2) strengthening capacity; (3) transition to the evolving global trade regime; and (4) globalisation. These break-out sessions met separately from 13:15 to 15:00 hours.

Break-Out Session: Tackling Volatility, Vulnerability and Natural Disasters

The Hon Rajkeswur Purryag, Deputy Prime Minister, Mauritius, chaired this session and Mr Jeremy Collymore, Regional Co-ordinator of the Caribbean Disaster Emergency Response Agency, was the rapporteur. He welcomed the participants and pointed out the need for the group to concentrate on issues not clearly addressed in the interim report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States. He emphasised the need for the group to put forward concrete proposals for the consideration of the Task Force. He then invited Dr Russell Howard, South Pacific Applied Geoscience Commission (SOPAC), to make his presentation on vulnerability.

Dr Russell Howarth said that the interim report did not fully cover environmental vulnerability. It emphasised economic aspects. Dr Howarth observed that if the issue was the reduction of vulnerability, there was need to put in the disaster component. He referred to the Barbados Declaration and Plan of Action which dealt with environmental vulnerability and said that to address the issue comprehensively, one should look at three aspects of vulnerability: economic, social, and environmental fragility.

While acknowledging that the economic parameters of vulnerability were critical, Dr Howard thought that environmental aspects of vulnerability needed to take an equally prominent position in the report. The impact of disasters and the number of such events themselves were increasing. He stressed the need for quantifying environmental vulnerability. He suggested that serious consideration needed to be given to developing catastrophe insurance.

The Representative of Antigua and Barbuda suggested that in addition to the three areas mentioned, two other important areas needed to be covered in the Task Force report, namely, the security dimension; and the political aspect of vulnerability. He stated that there was work to be done on the environmental aspect and noted that this issue was addressed at the Durban meeting of the MGSS. He said that the Commonwealth Secretariat's work on the Index should be seen as work in progress. He also raised the issue of shipments of nuclear waste through the Caribbean and Pacific seas that was of deep concern to countries of these regions. He asked whether insurance covered such risks. The Caribbean countries felt that these shipments should not take place at all and this concern should also be articulated in the report.

The Representative of Barbados added that the Task Force report should address other aspects such as market vulnerability and security problems concerning drugs. He felt that the report addressed all markets in the same way. There was no recognition of differences between large and small markets and market imperfections. He pointed out that when there was a shock, the impact was less in a large market than in a small market. He gave the example of the shocks caused by the oil price increases in the 1970s and noted that most advanced countries were back in surplus in their balance of payments within two years, while many LDCs were facing difficulties even after many years. On the proposal to develop insurance to

cover volatility in export earnings, and for covering disasters, he was unclear on how such a system would operate and suggested that these mechanisms should be elaborated clearly. He suggested the need for knowledge networks for vulnerability reduction and capacity building.

Mr John Pollner, World Bank, in responding to the questions raised on insurance said that his paper on disaster insurance was not meant to cover the entire range of risk management strategies to deal with disaster events which included a number of key pillars. He said that the focus of his report focussed on one pillar, i.e. insurance. There were other arrangements involving governments, and multilateral and bilateral agencies to address the other pillars such as preparedness, mitigation, regulatory reform, construction and zoning standards.

The Representative of Grenada pointed to the persistent nature of natural disasters in the eastern Caribbean. He noted that the region lacked the capacity to prepare for disasters and to take mitigation measures.

The Representative of the Caribbean Development Bank stressed the need to get small states issues properly reflected in the Task Force report. He referred to inconsistencies in the report and pointed out that volatility was treated as vulnerability. He felt there was a difference between these two concepts (for example paragraph 9 and 10), and added that the report did not address adequately the implications of export openness on volatility. He felt that the report had not included policies on diversification, natural disasters and commodity insurance in its 'The Way Forward' Section. These needed to be addressed in the final report of the Task Force.

The Representative of Malta reiterated his criticism of the Commonwealth Vulnerability Index. He expressed his concern that the interim report referred only to the Commonwealth Vulnerability Index and not work done by other institutions. This had the danger of weakening the small states' vulnerability argument. Referring to UN reports on environmental vulnerability, he suggested that it was necessary to mention these and that the conclusions of the Task Force report were based on a number of studies.

The Representative of Lesotho recognised the importance of the conference for small states. He supported the view that the work on the vulnerability index should be just the beginning of a process. He repeated his concern about Lesotho, Papua New Guinea and Jamaica being left out of the list of small states included in the Task Force report. He urged that this ought to be reconsidered.

The Representative of New Zealand also spoke on the measurement of vulnerability and stressed that this needed more work. She pointed out that vulnerability as presently defined was narrow and needed to be expanded. The root causes of vulnerability needed to be defined. She indicated that the UN Committee on Development Policy was working on new criteria for graduating countries from the LDC category and proposed that the conclusions of the Conference should be transmitted to the Committee.

Ms Kamel, World Bank, in responding to questions raised on commodity risk

management, said that the proposed insurance scheme to deal with price volatility was one among several measures. Other instruments to be used would include:

- capacity building and institutional development;
- international intermediation to bring participation of small producers;
- insurance to protect smallholders from unpredictable prices.

Break-Out Session: Strengthening Capacity

This session was chaired by **HE Mr Bertrand Rassool**, High Commissioner of Seychelles in the UK and Mr Neville Beharie, Inter-American Development Bank, was the Rapporteur. The Chairperson introduced Ms Margaret Callan of AusAID and asked her to make a presentation on capacity building from the donor's perspective.

Ms Callan informed the group that AusAID was the world's largest donor to small states. Its assistance accounted for 23 per cent of all DAC flows to small states, and more than one-third of its aid programme was directed towards small states. She said that AusAID wished to share its considerable experience of effective development assistance for capacity building in small states. Ms Callan agreed with the Task Force report's identification of the implications of smallness, and noted that in the South Pacific, dispersion made the problems even harder. The characteristics of small state administrations were: small staffing addressing multiple portfolios; limited financial resources; lack of training; general shortage of management and problem-solving skills; and a low adaptability to change.

Ms Callan noted that Pacific island countries (PICs) had embraced a programme of public sector reform. She identified lessons from Australia's experience with PICs in the past five years, when capacity building initiatives had been particularly intense:

- It was important to adjust the pace, sequence and complexity of change to small states' capacity and political realities. Ms Callan emphasised that institutional change was a long-term process which required long-term commitment. Small states' ministries needed to be given time to see changes and achievements.
- There was a need to concentrate early efforts in areas where there was commitment to change. Support should first be given to whichever agency was playing the leadership role. This was often the finance ministry, but not always. Early support was essential, as was maintaining that support. The creation of new institutions to drive change should be avoided as it tended to build resentment. Ms Callan advocated the use of some immediate technical assistance on items such as budget control and revenue measures, followed by work to design a programme of long-term assistance. In this way, projects would be better informed.
- There was also a need to maintain flexibility and avoid rigidities in donor support. AusAID contracted out its assistance work and found that in the past these had not been sufficiently flexible. AusAID had moved towards 'reasonable milestones' as a sufficient basis for payment.

Ms Callan noted that there was a growing market of people with the technical, political and analytical skills to do the work.

The Chairperson thanked Ms Callan for her presentation and opened the floor for discussion.

The Representative of CARICOM supported the use of a multi-sectoral pool of advisers, at either regional or national level, which was funded by donors. He called for flexibility of expenditure so that different types of human resources could be used in capacity building programmes. He noted the importance of timing and sequencing of policy changes as well as institutional changes.

The Chairperson said that the question of adjusting the pace and sequencing of change to the need for good governance and capacity building in small states, had not been sufficiently addressed in the interim report of the Task Force and other documents. His country was treated as equal to others in this regard, though it had just emerged from a one-party system.

The Representative of Tonga noted that the interim report did not adequately address the problems of weak institutional capacities and aid co-ordination. He stressed the importance of knowledge networking among countries. Capacity building and technical assistance needed to be country-driven and based on national priorities. Since participation in the global economy was indispensable, capacity building should include IT and e-commerce. The capacity of regional institutions serving small states should also be strengthened.

A number of delegates, including those from the World Bank, Mozambique, and Jamaica, spoke about the need to improve salaries, and to create balanced incentives structures in order to ensure that capacity-building programmes were sustainable. Incentives needed to be rooted in the conditions prevailing in the country. One delegate noted that donors saw improved salaries as a matter for countries to determine themselves. Another noted the effect of the brain-drain, low salaries, poor administration and corruption on capacity building. A third discussed the problems of establishing parallel systems for locals and expatriates.

On the loss of human resources through expatriation, a number of delegates noted that effects were both positive (providing remittances and a network of experts) and negative (brain-drain). This was a complex issue and its impact varied from region to region. The brain-drain could become an asset through the use of links to the diaspora, and programmes to repatriate expertise by harnessing their skills, for example, as they approached retirement. Countries needed to look at the whole balance sheet in considering responses to this and related issues.

On skills development, one delegate called for the review of training opportunities since OECD countries had raised fees, and scholarships were now less readily available. Another delegate advocated the strengthening of regional training institutions and home-grown training programmes. One delegate saw policy formulation, analysis and implementation as vital priorities. **The Chairperson** suggested that the Commonwealth Secretariat should examine capacity strengthening for small states within its framework for human resources development programmes,

the process of globalisation, and population dynamics, including gender issues.

The Representative of Jamaica informed delegates that Jamaica had created a 'skills bank' of overseas Jamaicans and recent retirees. One of the priorities was to strengthen institutions and in order to address this problem, donor agencies should work with small states to identify nationals with requisite skills. He pointed out the lack of incentives to retain appropriate staff; on the other hand, transfer of skilled personnel to incompatible posts on account of political changes should be discouraged. In terms of human resource development, regional, as well as country, differences were noted. For instance, in the Caribbean, the education pyramid of 100 per cent at primary and 50 per cent at secondary, was laudable but the share at the tertiary level of 7 per cent was inadequate. In contrast, in the South Pacific, basic education was still a major problem needing urgent attention.

The Group concluded that:

- Small states had limited capacity to address globalisation issues. Coupled with this was the speed at which these changes were taking place. These states had to resolve the complex problems of transition, whilst taking advantage of opportunities generated by this phenomenon.
- Political commitment to change and capacity building was important. In many cases, sustaining commitment over time was a vital issue. It was recommended that such commitments should be carried over from one administration to another.
- Sectoral approach to assistance and to capacity-building must have a convergence of objectives by national governments and donors alike to ensure realisation of economies of scale.
- There was a need for effective and improved capacity to deliver programmes.
- There was a role in IT and mechanisms to improve such capacity building initiatives and assistance.
- The importance of governance was pervasive – the rule of law, transparency – was reiterated.
- There was a need to develop a directory of specific capacity deficiencies varying from country to country, levels, and regions, as well as a directory of expatriate, national and regional experts from small states. Mechanisms to tap external and regional 'pools of experts' were needed.
- This may be achieved through building an in-house capacity by strengthening regional institutions and identifying economies of scale in capacity and training programmes.
- Salary and incentive structures of public services need to be rationalised.
- The need to work at horizontal cooperation between regions, sub-regions and small states on TCDC basis was reaffirmed. The exchange of experiences, transfer of replicable good practices, and knowledge of skills through TCDC mechanisms were highlighted.

- There was a need to adopt a wider approach and strategic programmes and mechanisms for strengthening capacity, which included a whole set of partners: the public and private sectors, and civil society.
- There should be clear areas identified for co-operation with partner organisations and to change their attitudes toward special problems of small states.

Break-Out Session: Transition to the Evolving Global Trade Regime

This session was chaired by the **Hon George Odlum**, Minister of Foreign Affairs and International Trade, St. Lucia, and Dr Arnold McIntyre was the Rapporteur. The discussions in this session focussed on two main issues: (1) special and differential treatment for small vulnerable states; and (2) the definition of small states.

In his introduction, **the Chairman** noted that there was a case to be made for special and differential treatment of small states, especially during the transition period when they were expected to be integrated into the global economy. The basic question was whether SVSs should demand the same concessions as those given to LDCs, or whether to ask for separate concessions which would be specific to the requirements of small states. One view was that it would be more efficient to simply ask for the same concessions as LDCs rather than negotiate special concessions for small states. However, the majority seemed to support the second option, on the grounds that the needs of small states did not always coincide with those of the LDCs. SDT for small states should be a subset of special trade arrangements, argued on the basis of their vulnerability.

The Representative of the South Pacific Forum stressed that it was not adequate to seek SDT solely within the WTO. Such treatment should also cover Bretton Woods institutions. At present there were great inconsistencies between trade negotiations and structural adjustment programmes for SVSs. These inconsistencies needed to be addressed and removed. He proposed the establishment of a work programme at the WTO on SDT for vulnerable small states. He emphasised that such a programme should be dynamic with its terms of reference to review and suggest reforms over time as the global trade regime evolved.

The WTO Representative enquired what kind of special recognition small states wanted – whether it was a specific package of concessions that would be applied across-the-board to SVSs or whether they wanted a package that would be flexible enough to be tailored to the specific needs of each country. His own suggestion was that SVSs would be better off without a category-specific package.

The Representative of St. Lucia questioned the notion of packages as addressed in the Seattle talks, noting that there was need for clarification. He added that developing countries were being requested to transform their economies in response to the global transition process. He stressed that this presented difficulties for countries trying to grapple with competing demands with very limited capacity.

The Representative of the OECS noted that countries needed to adopt various strategies to mitigate harmful side effects of transition. He added that an examination of the fiscal polices of small states was required, in order to protect the welfare of people from external shocks. He cited the example of Barbados where the move from direct to indirect taxation had improved the fiscal situation. However, this might not necessarily be replicated elsewhere in the Caribbean. External support was essential for addressing such problems. He also stressed the fact that SDT was not legally binding on developed members of the WTO, while developing members had to make a number of commitments on accession. The representative reiterated the particular constraints on small states, and called for capacity building support in order to address the onerous procedures imposed by aid agencies.

The Representative of Jamaica noted the high cost of adjustment faced by so many small states, including Jamaica, in the process of restructuring their economies. He called on the international community to recognise this problem and provide support to smooth the process.

Another delegate stressed that SVSs had been in transition for a long time since preferential trading arrangements were being phased out gradually. Now SVSs were being asked to complete, in a matter of months, a transition which would normally take at least a decade. He asked for a more realistic transition period with adequate support from the international community to complete this process satisfactorily.

The Representative of Grenada referred to the proposed EU/ACP regional arrangements and noted that although the provisions offered flexibility for new initiatives, the necessary support did not precede the expected changes. The WTO had a responsibility to support capacity building on trade matters in SVSs. He noted the support that had been rendered to Russia as a good example of such assistance, and stressed that such support should be provided across the board.

The lack of a level playing field in the new trading arrangements was underscored by the Representative of Mauritius. He proposed that a WTO working party be formed to examine different actions that could be taken in favour of SVSs. He argued that preferential treatment accorded to SVSs, although marginal, often allowed them to make up for the high cost of transport and to remain competitive. The erosion of preferences was a relatively more serious problem for SVSs, and therefore they needed more support from the international community.

A Representative of the Commonwealth Secretariat drew attention to the fact that, while participants were asking for special treatment for SVSs within the WTO, in the new Lomé Convention, this feature was coming to an end in February 2000. SVSs would not benefit from any special consideration when negotiating the new trading arrangements with the EU. Moreover, they had lost the special treatment they formerly enjoyed, at par with LDCs, in accessing funds to compensate for shortfalls in commodity export earnings. In the latter case, no transition period had been granted, as STABEX will cease to operate with immediate effect.

The EU Representative argued that much had yet to be defined in the coming negotiations on new trading arrangements and informed the audience that the EU would be using the Commonwealth Vulnerability Index in defining countries for allocating funds under the new Convention. He reassured the audience as to the EU's sensitivity to the special case of SVSs. He thought that there was a need for the establishment of stable frameworks and systems in order to take advantage of opportunities offered by globalisation.

On the issue of definition of SVSs, many participants felt that undue importance had been attached to the population criterion in the work of the Task Force. In defining small states, factors that characterise these countries should be identified. These should not be simply physical characteristics that cannot be acted upon and changed, but should include variables which were amenable to policy changes.

The WTO Representative remarked that the issue was not about defining another group of countries, but ensuring that resources were made available. However, several representatives from the Caribbean endorsed the idea of a definition that focused on common factors, including income volatility and vulnerability. It was noted that the issue would be one of identifying real constraints and to underscore the particular mechanisms that can be triggered to address the problems.

The Representative of St. Lucia further stressed that the international community should recognise that small states needed particular support, for example market access, to overcome these constraints. He argued that while the issue of definition needed to be addressed, SVSs should not loose sight of the larger debate on SDT. The issue of packages, clarifying what was required, especially in terms of market access, was also an important concern. It was noted that the Caribbean had made a huge investment in exploring access to markets, and the links with multilateral agencies must be intensified in this regard.

On the issue of difficulty of accessing aid, the Representative of Dominica referred the onerous procedures of aid agencies which frustrated small states' capacities to meet their development goals. He called for a re-examination of the procedures required by major donors like the EU.

Mr Compton Bourne, UWI, called for complementary action like e-commerce to support regional marketing initiatives, stressing the need to continue to highlight the plight of small states with increased pressure on the international community.

Government procurement was also viewed by some as a problematic issue, as small domestic firms cannot compete with MNCs. The need to encourage small enterprises and to nurture the service industry in SVSs was underlined. It was suggested that large resource transfers would be required for this purpose. In the context of anti-dumping cases, the burden of proof should not be placed on small economies.

Break-Out Session: New Opportunities and Challenges from Globalisation

This session was chaired by **Sir Shridath Ramphal** and the Rapporteur was the Hon. Clement J Rohee, Minister of Foreign Affairs, Guyana. Sri Shridath invited Mr Anthony Hughes, Solomon Islands, to make a presentation on globalisation.

In his intervention, Mr Hughes highlighted several arguments on globalisation and its impact on small states. These included:

The need to understand the nature of challenges posed by globalisation, and to design an effective strategy to address the risks and the opportunities resulting from the phenomenon.

It was an inexorable process that affected everybody but not in the same way. Individual circumstances varied enormously and a unique mix of responses would apply. Therefore, there was need to know clearly and identify one's own objectives and prioritise them.

Once these objectives had been identified, appropriate policies were needed to achieve them. Two dimensions of globalisation needed recognition: governance and information technology. Governments of small states should assist the whole community to understand the process of globalisation.

It was not possible to find ready-made strategies for all countries hence the importance of each country identifying its own objectives.

Turning to the question of whether aid or the donor community could help in the process of globalisation, Mr Hughes indicated that it was important and necessary to recognise that the donor community was also involved in the globalisation process and that it had its own agendas. In his view, governments were not the driving force of globalisation. Therefore, new responses were necessary to address the challenges and to take advantage of the opportunities.

The Representative of Guyana indicated that he was commenting as a politician on globalisation. Governments did not have time to make an effort to understand the manifesto of globalisation. Even where they understood this process, they had limited capacity to address the problems. At the national level, governments still had to address the problems associated with the poor and the rich, in addition to the practical problems of globalisation. He indicated that there was need to deal with the question of capacity and resources in considering the challenges of globalisation. Globalisation was a complicated phenomenon and it could not be addressed by only looking at challenges and opportunities. In his view, the problem could be resolved by according special and differential treatment to small states in the international system.

A Representative of the World Bank indicated that the focus of the discussion on trade liberalisation had been limited to flows of goods and capital but it had not addressed the issues concerning labour flows. In his view, this was an area that needed attention, especially in small states.

A member of the Advisory Board indicated that the idea of movement of people was a critical issue, and a subject of discussion at the WTO. Concerning challenges and opportunities of globalisation, he agreed that there was need for countries to design strategies appropriate to their own circumstances. On technical assistance, he noted that most of such aid being provided was meant to assist countries meet their obligations and commitments under the WTO. He was of the view that such assistance should include other areas as well. He was also of the view that the Commonwealth Secretariat facility in Geneva should be strengthened.

The Representative of Trinidad and Tobago indicated that small states should be part of the group that was debating issues concerning the design of the new international financial architecture. Her country had been liberalising its economy and this had helped in attracting greater flows of Foreign Direct Investment. But, in terms of the region, FDI flows were grossly inadequate.

The Chairperson stressed the importance of the lack of a framework for addressing problems related to financial crises in small states. The G7 had taken the lead role in these deliberation. In his view, small states and other developing countries should also be involved in these discussions.

The Representative of Cape Verde indicated that there should be a worldwide set of rules governing capital flows. Small states needed to find areas of convergence if they were to attract financial resources to their countries.

The Representative of Gabon wanted to know what the legal implications of globalisation were and when it was expected to start. He inquired about the discussions of the G7 on this issue.

In response, **the Chairperson** said that globalisation was a reality. The problem was that it had occurred so quickly. Small states could not alter globalisation but they had to respond to it. He gave a brief account of G7 discussions concerning globalisation.

The Representative of Gabon said that globalisation had contributed to increased GDP in some small states and, therefore, there was no need to be alarmed.

The Representative of Caribbean Development Bank (CDB) indicated that globalisation would require the removal of barriers in trade for goods and services. To respond to globalisation, countries needed to change domestic production, acquire new skills and demonstrate greater flexibility. He indicated that the adjustment process was constrained by lack of labour mobility although labour was a crucial factor of production. The interim report of the Task Force was silent on the role of International Financial Institutions and, specifically, the International Financial Corporation), in the development of the private sector.

Sir Alister McIntyre indicated that Gabon was a special case in that it was rich in resource endowment and therefore was not representative of all developing small states. For instance, one billion people in the world lived on US$1 per day. In some way, globalisation attempted to set up rules and it was a technological

phenomenon. In this context, small states faced new challenges: for example, in tourism where the role of travel agents was vanishing on account of new technologies.

The Representative of Trinidad and Tobago said that her country was in a fortunate situation due to its sound macroeconomic fundamentals and this had encouraged foreign investment flows. However, foreign investment flows were confined to certain sectors such as tourism. In such instances, benefits transmitted to the local economy were not significant. The representative indicated that the interim report of the Task Force was silent on the negative side of foreign direct investment, especially in tourism, and what should be done to address these problems.

The Representative of Guyana reiterated that small states needed special and differential treatment in order to build dynamic productive processes. Otherwise, they would be unable to meet the challenges of globalisation.

In order to address the challenges and opportunities arising from globalisation, the Group recommended the following:

- There was need for each country to understand the challenges and identify the opportunities and then work together as a group on common issues.
- In considering the provision of technical assistance, it was important to understand the donors' objectives, since globalisation also affected them.
- To deal with globalisation the question of capacity building had to be addressed both at regional and national level and it should be understood that liberalisation also included movement of labour.
- The negative implications of foreign direct investment in the area of tourism had to be addressed in the report, including ways of overcoming this problem.
- Small states should be involved in designing new international financial architecture.

Final Plenary Session: (a) Reports of the Four Thematic Break-Out Groups

This session was chaired by the **Rt Hon Owen Arthur**, Prime Minister of Barbados. He first invited the Rapporteur of the break-out session on tackling volatility, vulnerability and natural disasters to present its report.

Mr Jeremy Collymore said that the group had approached the session by looking at the papers presented by the task force and experts and taking cognisance of the interventions made from the floor. While recognising that the work on the vulnerability index was very much work in progress, they had made the following suggestions:

1. The vulnerability index needed more environment-related components. It should include considerations of market vulnerability and the capacity of countries to

absorb risk in financial markets. The group recommended the establishment of knowledge networks to promote the sharing of experiences in vulnerability assessment and reduction.

2. The link between the insurance scheme and recovery needs anticipated for resilience was not clear. The responses of the uninsured to insurance purchase and the implications for the Fund's operations needed to be examined; the proposal needed to be evaluated against other market-altering options to influence insurance purchase and the potential effectiveness and efficiency of the proposal determined.
3. The critical gaps in the vulnerability index and the country profiling for actuarial purposes pointed to the need for capacity development in hazard assessment technology and reduction practices.
4. There were inconsistencies in the use of 'volatility' and 'vulnerability' in the interim report of the Task Force. Sometimes they had been presented as the same and at other times as different.
5. The Report needed to address the trade-off between high risk and high return associated with such factors as economic openness.
6. It was felt that the Report needed to give greater consideration to various options: for example, the role of diversification in vulnerability reduction and management should be clarified.
7. There was no evidence in the report of efforts to accommodate the inputs of experts, besides those of the Task Force, on the vulnerability index.
8 The Commonwealth Vulnerability Index should not be used exclusively in references to vulnerability indicators.
9. There was a need to reconsider some of the variables used in defining size, in particular, population size.
10. It would be desirable for the thinking of the meeting and the Task Force on issues of vulnerability indexing and graduation to be shared with the forthcoming CDP/ECOSOC meeting.

In conclusion, the group had recognised that the Task Force's work was at an embryonic stage and called for an urgent reconsideration of some of its approaches and methodologies.

The Chairperson invited the rapporteur of the break-out session on strengthening capacity to present his report.

Mr Neville Beharie, Inter-American Development Bank, said that the group had focused on the capacity-building requirements and priorities for small states. They had acknowledged that the problems were wide-ranging and diverse and that globalisation had made the problem of limited capacity even more critical. In particular, the nature of the capacity needed had changed and the speed at which this needed to be acquired had accelerated. The main challenge therefore was how to manage change through capacity building. Without major advance in

strengthening the ability to deal with these changes, it would be difficult for countries to deal with the challenges of globalisation and take advantage of the opportunities offered.

He summarised the issues raised in the session, as follows:

1. The capacity-building initiative needed to be adjusted in terms of pace, sequence and degree of complexity to the context of the country and the region in order for such changes to be sustainable.
2. Given the slow nature of changes in reconstructing capacity, strong political commitment to capacity building was essential and needed to be carried over from one administration to the next.
3. Effective capacity-building required a change of attitude by donors. Programmes needed to be flexibly designed and implemented in an adaptable manner over time.
4. Small states needed a mechanism for access to a pool of technical advisers. This was to be juxtaposed against the need to simultaneously build capacity within the countries themselves.
5. The issue of incentive structures was very important, especially salary structures within the civil service.
6. In view of the brain drain from many small states there was a need to set up a mechanism to develop an inventory of skills outside the country so that people could be encouraged to lend their skills to their original countries.
7. Given the large number of donors, there was a need to identify ways of improving the effectiveness and efficiency of delivery of assistance. This required action both in the donor community and in the countries themselves. Information technology might be drawn to help in that process.
8. Regional training institutions needed to be strengthened in order to identify training programmes that could help to build capacity and to identify the needs at different levels – country, regional and international. The identification of the hierarchy of needs would enable the development of strategic responses to capacity deficiencies.
9. Important areas for capacity-building included capacity to formulate policy, capacity to build institutions and capacity to adapt to change. With regard to institutions, there were two dimensions: strengthening the human resource base; and improving the systems and procedures employed in implementing development programmes.
10. In many instances, capacity-building would be enhanced by a sectoral approach, but only if the donors also adopted a similar approach.
11. Great importance was attached to governance and having clear rules in order to encourage systematic treatment of capacity-building, the rule of law and the implementation of programmes according to rules and regulations rather than by whim and fancy.

12. The importance of horizontal co-operation was also stressed, i.e. knowledge and skills would be transmitted through technical co-operation among developing countries themselves.

13. Finally, it was stressed that capacity-building applied not just to the public sector. Mechanisms needed to be found to bring the private sector, labour and civil society into the process of building strong development institutions.

The Chairperson invited the rapporteur of the break-out session on transition to the evolving global trade regime to present its report.

Mr Arnold McIntyre reported that a consensus emerged at the meeting on the need to provide special and differential treatment for small states. But there was also a consensus that this should not be similar to the treatment given to least developed countries in the WTO. The meeting called for a sub-set of measures in favour of small states focusing on issues relating to vulnerability. It was up to the small states to clearly define the specific provisions they would require. A work programme on small economies in the WTO would assist them in achieving the SDT objective and would imbue the process with dynamism.

Another point of consensus was that the special and differential treatment envisaged was not confined to transition in terms of trade rules. Small states were grappling with transformation involving development of new industries and improving the efficiency of existing economic activities. Simultaneously, small states had resource deficiencies that constrained transformation. There would be winners and losers in the process of transformation and the magnitude of the losses could undermine the process of transformation. In this regard, safety nets would be important. Hence there was a need to examine fiscal capacity in the period of transition. But fiscal capacity was itself related to the dimensions of the new international trading environment. Fiscal returns had been affected by high rates of income volatility. To adjust to these fiscal difficulties, many small states had had to reduce capital expenditure, which was inimical to growth. This suggested that transitional arrangements for small states to adjust to the new global trade regime could not only be through trade rules. It required institutional coherence between work in the WTO and the programmes of the Bank and Fund to ensure that not only do we provide appropriate transitional arrangements through trade rules but that adjustment programmes and assistance to small states addressed the critical issue of capacity-building to facilitate transition.

The group noted that some of the constraints facing small states were structural. Therefore, some of the special and differential treatment measures for small states should be given on a permanent basis.

The effectiveness of development assistance to small states in the transition period could be seriously undermined as a result of lengthy bureaucratic delays in the delivery of development assistance. It was therefore necessary for the donor community to make a conscious effort to redesign procedures for fast disbursement. The recent commitment by the EU to improve the speed of disbursement under the successor agreement to the Lomé IV Convention was a welcome development.

Finally, it was agreed that small states must not allow the issue of the definition of small and vulnerable states to be the focus of debate. Intuitively, all countries knew the range of countries covered by the term. What was now being sought was to develop statistically robust measures for developing operational programmes. The 1.5 million cut-off could not be seen as being cast in stone. The focus must be on the plan of action to assist small states in the transition process. The session therefore tried to focus on the practical policy agenda that could be the basis for implementation.

The Chairperson invited the rapporteur of the break-out session on new opportunities and challenges from globalisation to present his report.

The Hon Clement J Rohee, Minister of Foreign Affairs, Guyana, said that the group had begun by discussing the need for understanding the challenges of globalisation and for people to know about the objectives of the process. It had also focused on the need to look at the question of governance and the provision of information to assist people to understand the implications of globalisation.

The question was asked whether donors could assist small states in meeting the challenges of globalisation since they had their own agenda. Each country needed to know what the challenges and opportunities were and to find common ground among themselves.

The view was expressed that globalisation was driven by the market place, which threw up its own dynamics and contradictions. There was a need to build capacity to deal with the challenges as well as the opportunities of globalisation. Globalisation must be linked to competitiveness.

The view was also expressed that there was a need to return to the fundamental question of capacity-building, institutional strengthening, human resource development of and for small states in the context of special and differential treatment. The question of free movement of labour needed to be taken into consideration when discussing free movement of goods and services. There was also a need to go beyond the demand for technical assistance for capacity-building. Information sharing at the technical and negotiating level to overcome the paucity of human resources was one of the experiences referred to. The need for small states to have a physical presence in Geneva was emphasised.

The issue of globalisation and the new financial architecture was also raised and the view was expressed that small states must be involved in the negotiation of codes of conduct with a view to influencing the content of these instruments. There was also a need to place the question of global governance and global labour markets on the table. The question was raised of how the global economy was managed and the response was that this should not be left solely to the G8. Small states must seek to influence discussions on the new financial architecture and the donor community needs to find areas of convergence. Donors need to change their attitude to the funding of small states.

The view was expressed that globalisation had wide-ranging implications and that changes would be required in public and private sectors in order to build produc-

tive capacities. The question was posed as to what role the multilateral institutions should play to help upgrade private and public sectors. The interim report of the Task Force was silent on the role of the IFIs and the IFC in capacity-building in the private sector.

The group discussed the danger of jobless growth that was inherent in the process of globalisation and noted that the interim report was silent on the downside of tourism. Foreign direct investment was not a panacea for development – in fact, in some cases, it had resulted in jobless growth.

The group's specific recommendations were:

1 Each country needed to understand the challenges and identify the opportunities of globalisation and to work together as a group on a common ground.
2. With regard to technical assistance, it was important to understand the objectives of the donor.
3. To deal with globalisation, it was necessary to address the question of capacity-building and the fact that liberalisation included movement of labour.
4. The negative implications of tourism must be addressed in the report.
5. Small states must be involved in designing the new financial architecture.

Chairperson's Conclusions

The Rt Hon Owen Arthur, Prime Minister of Barbados, said that as the Chairman of the Conference, he welcomed the contributions of participants to the discussion. He had no doubt that these would be useful for the Task Force in finalising its report. In his Conclusions, as the Chairperson of the Conference, he could not promise to cover every detail and nuance that had been raised, but he believed that in the following remarks he had captured a broad consensus from their deliberations.

Action and an Ongoing Work Programme

The October Interim Report of the Joint World Bank/Commonwealth Secretariat Task Force on Small States set out a contextual framework in which to consider the development problems peculiar to small and vulnerable states. That framework was strongly endorsed by Commonwealth Heads of Government (CHOGM) and the Commonwealth Ministerial Group on Small States (MGSS) when these groups met in Durban, South Africa, in November 1999. CHOGM and MGSS recognised that part of the interim report reflected work in progress and requested that additional study and consultation take place before a final report of the Task Force was submitted to the April 2000 meeting of the Development Committee.

The further work carried out since preparation of the Interim Report, further consultations and discussion at the London Conference, had identified a set of key policy issues that called for a continuation of some current action, the introduction of proposed new initiatives and the dynamic development of an ongoing agenda of future work.

1. Tackling volatility, vulnerability and natural disasters

The work of the Commonwealth in analysing the vulnerability of small states[1] was welcomed, as was the derivation of a vulnerability index for developing countries.[2] The latter analysis, just concluded, demonstrated that most small states were more vulnerable than their larger developing country counterparts, and proposed that this vulnerability should be taken into account in programmes of assistance provided by the multilateral development, finance and trade institutions. The work being carried elsewhere on similar indices was also recognised.

The vulnerability and special characteristics of small states, and weak capacity in the private sector, contributed to perceived riskiness and difficulty in attracting private investment flows. A relatively high level of continuing official assistance was therefore appropriate for small states, as was the continued application of flexible graduation procedures at the multilateral institutions.

Given the strong risks and consequences of natural disasters in many small states, the Conference welcomed the work by the World Bank on new approaches to disaster mitigation and insurance in the Caribbean. It also welcomed the Bank's intention to co-operate with states in the region to develop and support risk pooling arrangements, to complement improved disaster mitigation and prevention measures (for example, in the context of the Prevention Consortium) which could greatly reduce the costs of disasters when they occurred. And the Conference encouraged the Bank to build on the same approaches in other regions.

Many small states remained dependent on commodity production, and the Conference encouraged the Bank in its further work on commodity price risk management to pay attention to issues and commodities of relevance to small states. It recognised, however, that many small states were exposed to different risks, for example fluctuations in volumes and tourism earnings, and that these needed a combination of different approaches.

Many small states had vulnerable physical environments as well as vulnerable economies. As development took place, it would be crucial to ensure that it was sustainable by protecting the environment at the same time. Many mistakes had already been made in this area, for example in insensitive tourism development and over-exploitation of non-renewable resources. The Conference welcomed the willingness of the international agencies, including the World Bank, to support small states in this regard, both with advice and finance.

2. Strengthening Capacity

All those providing support for small states needed to continue to help them

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[1]Commonwealth Advisory Group (1997). *A Future for Small States: Overcoming Vulnerability*. Commonwealth Secretariat, London.

[2]Atkins, J.P., Mazzi, S. and Easter, C.D. (2000). *A Commonwealth Vulnerability Index for Developing Countries: The Position of Small States*. Economic Paper No. 40. Commonwealth Secretariat London.

address their problems of limited capacity, both in the private and public sectors. In this context, the Conference highlighted the following specific issues.

There was a continuing task of accumulation of knowledge about policies and approaches that worked and did not work for small states, and of sharing this knowledge and experience among states both within and across regions. The Conference welcomed the establishment by the Commonwealth Secretariat of a dedicated small states web site and the proposal that the World Bank establish a capacity for accumulating and sharing such knowledge, both that generated within the Bank and outside, using mechanisms such as the creation of a Bank-wide small states thematic group, developing a small states web site, and arranging meetings where representatives of small states could share experiences and discuss new developments.

An important approach in tackling limited capacity in small states was to develop regional approaches wherever feasible. The multilateral institutions and other donors should reinforce existing programmes by enhancing their lending and non-lending services to encourage and support such co-operation, particularly by assisting regional organisations dealing predominantly with small states.

A particular aspect of limited public sector capacity was the lack of adequate resources to participate fully in international trade negotiations. The Commonwealth, through its permanent trade advisers in Geneva and Fiji, already provided assistance of this type to its member countries. It would continue to do so and had expressed a willingness to take a lead in expanding such facilities. The Conference welcomed the offers by the World Bank and others to provide additional support in this respect, and the recent creation of an 'Advisory Centre on WTO Law'. It hoped the WTO would find other ways to help, for example, by allowing groups of small states to be represented collectively at discussions where they wished.

Another aspect of limited public sector capacity, where the multilateral institutions could help, was dealing with utilities' regulation and competition policy; issues of considerable importance with the prevalence of monopoly or oligopoly suppliers in small states.

Activities and requirements of multiple donors place heavy and unnecessary burdens on limited administrative capacity in many small states, as was well illustrated by a recent study by the World Bank Operations Evaluation Department. This needs to be addressed by a new approach, the building on principles of partnership and country leadership that underlined the Comprehensive Development Framework approach. The Conference strongly urged donors to join together country by country, in country-led partnerships, to align their objectives, rationalise their support and simplify their procedures in order to reduce these burdens. Again, helping build country capacity and the forging of closer working relationships with regional organisations would help in this regard.

3. Issues of Transition to the Developing Global Trade Regime

Small states must adapt, indeed transform, their economies to secure the benefits

of globalisation and the increasingly open global trading environment; trade policy for small states, as for other developing countries, needed to be seen as part of sound overall economic development strategy. But the work of the Task Force had shown that many small states would face special difficulties in making this transition and would need time to adjust to changes in the external trade regime, and sequence changes in their economies. For those vulnerable small states that were not LDCs, the Conference recognised that it would be inappropriate to generally accord them the present Special and Differential Treatment for LDCs. However, their particular vulnerability should be recognised as justifying special consideration to deal with crucial areas of transformation of their economies, including length of transition period, and other matters such as the global process of trade liberalisation, and the removal of special protective regimes, continued. The WTO also needed to make a fundamental review of the current process of accession as it affected small states and the associated costs for these countries.

The Conference recognised that trade liberalisation could have major fiscal consequences for small states and were encouraged that the IMF had taken a pragmatic approach to the advice it gave to small states that risk losing a major source of fiscal revenue as tariffs fall, recognising that for some open, small economies low, flat-rate tariffs may be a component of an efficient source tax system. However, as small states moved to more service based economies, they would need to adopt broader-based consumption taxes. They also needed technical assistance from the IMF and others in tax administration.

4. New Opportunities and Challenges from Globalisation

Some small states would need external support and advice as they seek to reposition their economies. They needed enabling environments and the right kind of public policy support – for example, in training and education, and creating regulatory frameworks – to encourage new activities, many of which would be in the service sectors.

The Conference recognised the right of countries to compete in international financial markets, through the provision of both onshore and offshore financial services. These activities were currently the subject of scrutiny by the OECD's Forum on Harmful Tax Competition and the Financial Stability Forum. This was causing concern for a number of small states because of a lack of adequate consultation on the matters being addressed. The Conference welcomed the OECD's indication of willingness to engage constructively with small states on tax competition issues and encouraged the development of an effective multilateral discussion. It also noted the substantial importance of financial services to the economies of small states and, at the same time, acknowledged the need for improvements in operating practices and regulatory standards in relation to financial transactions in order to safeguard the international banking and financial system, and to prevent financial and tax crime. The meeting recognised the importance of all these issues being considered in international fora where small states themselves have a voice, so that their interests could be taken into account. It would therefore be appropriate for multilateral institutions to study these issues

and look for solutions that pay proper regard to the interests of small states, as well as to the need to foster stability in the global financial system.

Finally, work on the opportunities that information technology and electronic commerce would bring to small isolated states suggested that these technologies would be a major source of help in their development. But success required the correct public sector infrastructure, crucially a regulatory framework that would deliver high quality/low cost telecommunications services. It was important to note that this provided a challenge in which many small states must have external support from the Multilateral Development Banks and others.

As multilateral institutions and donors co-operated in helping to take this work programme forward they would need to continue to be guided by the views and experiences of small states themselves, as the Task Force had been in the preparation of this report. The completion of the Task Force's work should not be seen as the end of a process, but as a stepping stone to continued attention to small states' issues by the international development community.

The Conference welcomed the proposals by the World Bank and Commonwealth Secretariat to continue to co-operate on this work program in partnership with each other, with small states themselves and with other relevant international institutions. More generally, it welcomed the work that had been done so far, including this conference, as the beginning of a new partnership between small states and the multilateral institutions. It looked forward to further discussion of these issue at the Meeting of the Development Committee in April and at the Meeting of Commonwealth Finance Ministers in September.

Transmission of the Final Report

In terms of completing the work of the final report of the Task Force and its transmission to the Development Committee and Commonwealth fora, the Chairperson indicated a tight schedule, which is given in Annex C.

The Chairperson adjourned the meeting at 17:30 hours.

Annex A. Directory of Delegations, Organisations, Observers and Secretariat

ANTIGUA AND BARBUDA
H.E. Mr Ronald M. SANDERS, CMG
Chief Foreign Affairs Representative with Ministerial Rank, High Commissioner to the United Kingdom and Member of the Advisory Board to the Joint Task Force

AUSTRALIA
Ms Margaret CALLAN
Director, Policy Management Reform Section, AusAID

Mrs Paula WATT
Counsellor, High Commission to the United Kingdom

THE BAHAMAS
H.E. Mr A. Leonard ARCHER
High Commissioner to the CARICOM States

BARBADOS
The Rt Hon. Owen S. ARTHUR
Chairman of the Conference
Prime Minister and Minister of Finance and Economic Affairs

H.E. Mr Peter SIMMONS
High Commissioner to the United Kingdom

H.E. Sir Courtney BLACKMAN
Ambassador to the United States and Permanent Representative to the Organisation of American States

Mr Erskine GRIFFITH
Director of Finance and Economic Affairs

Mr Charles BURNETT
Minister/Counsellor, High Commission to the United Kingdom

Mr Ronald PRESCOD
Senior Research Economist, Ministry of Finance and Economic Affairs

BELIZE
H.E. Mr Assad SHOMAN
High Commissioner to the United Kingdom

Mr Alexis ROSADO
Deputy High Commissioner to the United Kingdom

BOTSWANA
Mr John MORETI
First Secretary, High Commission to the United Kingdom

BRUNEI DARUSSALAM
H.E. Dato Haji Yusof Abd. HAMID
High Commissioner to the United Kingdom

Mrs Masurai MAARI
Assistant Director, International Organisations Department, Ministry of Foreign Affairs

Mrs Krtini TAHIR
Second Secretary, High Commission to the United Kingdom

CANADA
Mr Stephen FREE
Director-General, Caribbean Programme, Americas Branch, Canadian International Development Agency

Ms Elizabeth BALDWIN-JONES
First Secretary, High Commission to the United Kingdom

CAPE VERDE
The Hon. Jose Ulisses CORREIA SILVA
Minister of Finance

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Annex B. Opening Statement by The Rt. Hon. Owen Arthur, M.P., Prime Minister of Barbados

In the interval when this Global Conference on the Development Agenda for Small States was being planned, an event occurred which, for me, has added a greater poignancy and a sharper and deeper purpose to the endeavour on which all of us associated with this conference are embarked.

My country – all 166 square miles of it – has since 1998 been graduated from access to World Bank financing.

We now have to make our way in the world on the strength of our capacity to raise funds for our development on the international capital market.

The ratings therefore assigned to our debt by rating agencies are not an abstract issue; it is for us a matter of life and death.

It is in such a context that I share with you the substance of the ratings report issued on 17 December 1999 on Barbados by Standard and Poor's.

Standard and Poor's assigned an A longer-term and A-2 short-term foreign currency sovereign credit ratings to Barbados, and delivered itself of the following rationale for support in its rating:

'Barbados' ratings reflect its tradition of prudent economic management which has contributed to seven consecutive years of economic growth and resulted in a per capita GDP approaching US$10,000. It reflects its modest and declining debt burden and low debt service. Its total debt service is likely to remain at around 19 per cent of exports, well below that of rated peers. It also reflects its stable political system which has created a consensus on major economic issues.

'The country's ratings are, however, constrained by its vulnerability to external shock.'

In the final analysis, Barbados' credit rating turned not on the strength of its economic performance nor the quality of its policies for the management of its economic affairs. It turned on a special circumstance – its vulnerability as a small economy, and the perception that, in such a capacity, it has to be treated differently from its peers, even though its performance and the quality of its policies are no different from theirs.

Smallness, vulnerability and volatility are for us therefore not abstract matters serving merely, as some would have it, as the basis on which we press irrational claims on the international community for special and differential treatment.

There are essential and measurable characteristics of our way of life which reputable institutions take into account in measuring the degree of risk to be assigned to relationships with us.

I therefore begin my short address to this Conference by observing that, irrespective as to whether the international community wishes formally to acknowledge the existence of a species of small, vulnerable society, such a species of society exists, wishes to carry on its development successfully and in conditions of dignity,

has made, and wishes to continue to make, a meaningful contribution to the development of the human condition, and wants now not to be further marginalised in the new Global Society but to take a productive and rightful place in the mainstream of that Global Society.

In the best and larger sense, these are the motives which bring us today to London which has been, in the modern history of mankind, the place where decisions of historic and far-reaching implications have come routinely to be made.

This global conference on the development agenda for small states holds the promise to be of similar historic dimensions. For though the international community has previously taken cognisance of the peculiar vulnerabilities of small states, this is the first time that it has shown the political will to devise specific measures to deal with those vulnerabilities.

To its credit, the Commonwealth has long championed the cause of small states. This is not surprising when you consider that two thirds of its membership are small states. The Secretariat has led the way in eliciting studies on all aspects of small states including the creation of a vulnerability index.

I was therefore privileged and honoured to lead the Ministerial Mission mandated by the Commonwealth Heads of Government to carry forward this important initiative on small states. We met with the President of the World Bank in July 1998 and got his wholehearted support. Thereafter the Commonwealth/World Bank Joint Task Force on Small States was set up and engaged in an exhaustive and exhausting process of consultation.

I must confess that I am most heartened by the enthusiastic response of the Commonwealth Secretariat's partners in this enterprise that has brought us here today. The World Bank has been a tower of strength in helping to pilot this project through. The WTO, the European Union, UNCTAD and IMF have all made very important contributions.

We have also benefited from the input of regional organisations, non-governmental organisations and the government of states small and large.

As a result of all this preparatory work, this conference has before it the Interim Report of the Joint Task Force of the Commonwealth Secretariat/World Bank on Small States: Meeting Challenges in the Global Economy. In addition the conference will receive papers on other issues having a direct bearing on the subject of the report, which will decide whether we will succeed in creating a new, relevant dispensation for small states in the global society.

I therefore urge you in the strongest manner possible to let us conclude our business at this conference and come up with a definitive analysis and set of recommendations for addressing the problems associated with the classic vulnerability of small states.

Happily, we have much to guide us. The literature on the vulnerability of small states has grown impressively since the early 1980s. By now it is well known that the vulnerability is occasioned by a combination of factors that include: remote-

ness and insularity, susceptibility to natural disasters, weak institutional capacity, limited diversity in production and exports, highly open economies heavily reliant on foreign trade and investment, and income volatility.

Their narrowly constrained economic bases mean that small states must constantly travel along a razor's edge of development, where the options for success are few, but the possibility for grave failures many. Whether they succeed or fail depends on how they respond to a wide variety of external shocks beyond their control.

Small states also know an existence of wildly fluctuating terms of trade and macroeconomic instability arising from market and environmental volatility. Indeed, for them, the recent financial and economic disturbances that threatened to overwhelm the emerging giants are merely part of their familiar circumstances.

The Joint Task Force, in compiling the interim report, received detailed submissions from a variety of experts on the practical consequences of vulnerability on the economies of small states. These are matters that will undoubtedly be discussed further at this conference. You will hear, for example, that small economies have severe constraints that make the adjustment process more difficult, and of necessity, slower than the adjustment process in larger, more developed economies.

But I must point out that all this is not new. These matters have been known for a long time. Indeed this is a lived experience for many of us. Small societies have had to bear up under the vicissitudes of international trade and financial developments largely on their own. In the process, they have evolved cultural and societal instincts for survival that may best be described as recurring resilience in the face of recurring adversity.

What is new, and what has occasioned with some urgency this gathering of distinguished persons here today, is the realisation that the vulnerability of small states, in the face of this recent phenomenon of globalisation, may lead inexorably to catastrophe unless there is a determined international co-operative effort to the contrary.

The timeliness and importance of this initiative on small states therefore cannot be emphasised enough. We are now at a crossroads where the successful integration of small states into the global economy is absolutely necessary if most of them are not to become failed societies and historical footnotes.

The leadership of small states have recognised this awful truth and have been making determined efforts to chart new courses for their imperilled societies. They have been engaged in devising coherent strategies for integrating their economies with the larger trading blocs and with the new global trading system. They have been re-engineering their domestic economies to make them export-propelled policies; to create the conditions for sustainable growth based on sound macroeconomic policies; and to foster an environment within which market-driven solutions can be found at all levels of the economic system. They have also been steadfastly building regional economic integration as a means of creating economies of scale.

But these efforts at domestic adjustment and regional co-operation alone will not suffice. The changes involved in globalisation are so profound that the implications for small developing countries cannot be addressed only by the pursuit of conventional economic policy.

I therefore submit to you that in confronting the challenges posed by the successful integration of small states into the new global economy, the opportunity has been created for the international community to embrace a new development paradigm.

We can establish that new economic and financial architectures can be devised and put in place that facilitate not only the safe, robust and profitable flow of capital which is so much the preoccupation of the powerful and well endowed, but also the sustained and sustainable development of the vulnerable and the marginalised, and that global development can be elevated to a new plateau of equity in which no one is left behind.

I submit also that it is entirely within the capacity of the geniuses at the disposal of the international community to devise new modalities of co-operation between nations at different levels of development that can uplift those at the bottom without retarding the development of those at the top.

The call for special and differential treatment for small vulnerable economies must therefore cease to be regarded as a threat to international prosperity, and merely as reaffirmation of a precept long ago articulated by Aristotle – that as between equals, equality, and between unequal, proportionality.

I submit also that the exercise through which we are embarked in this conference offers an opportunity of a new productive partnership between small states and multilateral financial and trade institutions.

Regrettably, that relationship has been marked by rancour, suspicion and frustration.

However, as E.M. Forster observed, 'The time for telegrams and anger has passed'.

This initiative on small states will establish whether the new Comprehensive Development Framework as articulated by the World Bank can be made to work in a manner that truly confers ownership over the development process to the real stake holder.

It will establish whether insofar as the strategic global repositioning of small states cannot be met by traditional financial programmes, there is the will to devise development financial facilities appropriate to contemporary realities.

The initiative which this Conference also exemplifies, challenges us to devise new frameworks to govern the graduation policies of financial institutions, new facilities to mitigate the impact of natural disasters on small societies, new, sensitive approaches to the creation of a new international trade regime that can be of service to all mankind.

As the Chairman of the Commonwealth Ministerial Group on Small States, I

should not leave this Opening Ceremony without being very specific about what this Conference is intended to achieve.

The Joint World Bank/Commonwealth Task Force has in its Interim Report of October 1999 already captured the contextual framework within which the economic circumstances of small states should be treated by the international communities.

The Interim Report however also pointed to four areas in which further work was needed and further consultation required before a Final Report on Small States could be submitted for the consideration of the global community.

These concern new approaches to tackling problems of vulnerability and volatility, new approaches towards effective capacity building in small states, examination of the transition mechanisms that will best facilitate the integration of small economies in the evolving international trade regime, and a review of new development options and opportunities presented to small states by globalisation.

This conference is intended to enable concentrated focus on the part of the stakeholders on these four essential issues to facilitate the preparation of a Final Report on Small States which can thereafter provide a continuing agenda for action and analysis by the states themselves and by the international and other organisations that provide external support and influence their development.

The proceedings of this Conference should therefore allow the Task Force on Small States, now that it has set out in an interim report the contextual framework, to prepare the Final Report which includes an integrated and coherent policy framework within which matters concerning the development and repositioning of small states can be approached, and which can trigger a continuing agenda for attention, action and analysis on this most vital matter.

This conference will therefore mark the end of a process of consultation towards the preparation of a Task Force Report. In a larger sense however, it should launch the beginning of a new development paradigm and a new partnership between the institutions of the international community and the small vulnerable societies of the world.

It is in that context that I am pleased to be here, and pledge to use my offices as your Chairman to achieve the purposes this historic conference has been designed to achieve.

Annex C. Process and Schedule for Concluding this Activity

Draft report of the Task Force to be emailed to Advisory Board Members for comments within 48 hours

28 February 2000

Circulate Task Force Report to World Bank Board and Commonwealth Consultative Group on Small States (CGSS)

6 March 2000

World Bank Board Meeting, including comments from EDs representing small states

21 March 2000

Advise from CGSS

dates (tbd)

Circulation of short report to Development Committee (i.e. Executive Summary, including Board comments)

1 April 2000

Circulation of Report to Commonwealth Finance Ministers Meeting, Malta

September 2000

Review of progress of implementing the Report's Recommendations (Small States Forum in the wings of Bank/Fund Annual Meeting)

September 2001

Commonwealth Ministerial Group on Small States (MGSS) and the Commonwealth Heads of Government Meeting, Brisbane

November 2001

Appendix 2

Small States: Meeting Challenges in the Global Economy. Report of the Commonwealth Secretariat/World Bank Joint Task Force

Executive Summary

The report of the joint Commonwealth Secretariat/World Bank Task Force sets out a contextual framework in which to consider development problems peculiar to small states. Each small state is unique, and needs to address its development prospects in the context of its own cultural, historical, and social realities. There are also differences between regions. But most small states share a number of common characteristics. Assistance to small states can be made more effective with a better understanding of these characteristics and the development problems they pose. The report presents a range of common relevant policy actions for small states and the international community. The report also collects together more specific work programmes ('frameworks') on small states issues prepared and submitted to the Task Force by a number of multilateral institutions, including the World Bank and Commonwealth Secretariat.

Among the world's sovereign developing states with populations of less than 1.5 million people, 41 are members of the World Bank, more than 30 are eligible for Bank Group borrowing, and 29 are members of the Commonwealth. The incomes and stages of development of these states vary widely, from very poor African countries such as Guinea Bissau (with per capita GNP of $160) to wealthy countries such as Brunei, Cyprus, Malta, and Qatar (with per capita GNP of more than $9,000). While there is no special significance in the 1.5 million population threshold, it provides a useful starting point. But no single definition is adequate, and the Task Force does not recommend the creation of a special category of small states. Countries should be regarded as lying along a size continuum, with a number of larger states sharing some or all of the same characteristics.

What makes small states different? Their special development challenges

The report concludes that developing small states do share a number of characteristics that pose special development challenges. They are especially vulnerable to external events, including natural disasters, that cause high volatility in national incomes; many of them are currently facing an uncertain and difficult economic transition to a changing world trade regime; and they suffer from limited capacity in the public and private sectors. More specifically, the following characteristics define the special development challenges and vulnerabilities that many small states face.

Remoteness and isolation. Of the developing small states, three out of four are

islands and in some cases widely dispersed multi-island states, others are land-locked, and some of them located far from major markets. For many small states, like those in the Pacific, high transport costs make it harder for them to turn to world markets to compensate for the drawbacks of the small size of their domestic markets. And small domestic markets combine with large distances from other markets to reduce competition and its spur to efficiency and innovation.

Openness. A high degree of openness to the rest of the world brings benefits. But it also means that small economies are heavily exposed to events in global markets, and developments in the global trade regime, over which they have little if any influence. They also tend to rely more heavily on taxing imports as a source of revenue, leading to difficulties as tariffs are reduced.

Susceptibility to natural disasters and environmental change. Most small states are in regions susceptible to natural disasters such as hurricanes, cyclones, drought and volcanic eruptions, which typically affect the entire population and economy. Some are threatened by global environmental developments. Since most of such adverse events affect the entire population, risk pooling at the national level is not feasible.

Limited diversification. Because of their small domestic markets, many small states are necessarily relatively undiversified in their production and exports. Where one dominant activity has declined, it has tended to be replaced with another. This adds to vulnerability to changes in the external environment.

Poverty. There is some evidence that poverty levels tend to be higher, and income distribution more uneven, in smaller than in larger states. Where this is so, income volatility can create additional hardship as the poor are less able to weather negative shocks to their incomes.

Limited capacity. While weaknesses in both public and private sector capacity are a key problem for most developing countries, smallness of size adds a further dimension to the challenge. This is further compounded in states, like the Pacific islands, where the internal distances are large and the population is scattered. In the public sector small states face diseconomies of small size in providing public services and in carrying out the business of government, and tend to have relatively larger public sectors than other developing countries. As they face the challenges and opportunities of globalisation small states are also finding they do not have sufficient institutional capacity to participate fully in international finance and trade negotiations – the outcomes of which can profoundly affect their economies. In the private sector, as already noted, lack of diversification and domestic competition can hold back successful development.

Many of these factors combine to make small states' economies especially vulnerable, and in particular they affect:

Income volatility. Overall, the range of per capita incomes and rates of growth are not significantly different in small and large developing countries. However, the residents of small states experience higher volatility in their incomes – the standard deviation of annual real per capita growth in small states is about 25 per cent

higher than in large states. This reflects several of the factors listed above – their high levels of exports and imports and low diversification in production and trade which leaves them exposed to fluctuations in world markets, and their susceptibility to natural disasters

Access to external capital. Access to global capital markets is important for small states, and is one way to compensate for adverse shocks and income volatility. But the evidence is that private markets tend to see small states as more risky than larger states, so that spreads are higher and market access more difficult.

The way ahead: challenges and opportunities for small states: policies and external assistance to address them

The Task Force has concluded that addressing these challenges successfully will take a combination of the following: correct domestic policy action; in some cases new approaches to regional co-operation; continued external support and assistance from multilateral and bilateral development institutions; and improvements, where achievable, in the external environment. In particular, the Task Force has studied in detail four areas of special relevance to successful development in small states: how best to tackle volatility, vulnerability and natural disasters; issues of transition to the changing global trade regime; strengthening capacity; and key challenges and new opportunities arising from globalisation. In these areas the report identifies an ongoing work programme of actions, analysis, and new initiatives for the states themselves and for the international community. All these conclusions are consistent with views expressed during the extensive consultations carried out by the Task Force, and in particular with the conclusions reached at the global conference held in London in February 2000.

Tackling volatility, vulnerability and natural disasters

6. The Task Force has identified the following actions to help small states deal with problems of income volatility and natural disasters.

The work carried out by the Commonwealth and other organisations in analyzing the vulnerability of small states and deriving vulnerability indices for developing countries demonstrates that most small states are considerably more vulnerable than larger developing countries. This vulnerability should be taken into account in programmes of assistance provided by the multilateral development, finance and trade institutions.

The vulnerability and special characteristics of small states, and weak capacity in the private sector, contribute to perceived riskiness and difficulty in attracting private investment flows. A relatively high level of official assistance is therefore appropriate for small states where they have policies in place for such assistance to be effective, as is the continued application of flexible graduation procedures at the multilateral institutions.

The strong risks and consequences of natural disasters in many small states require new approaches by the states themselves and the international community. Donor support for disaster mitigation, for example in infrastructure, can have a

high pay-off. The work by the World Bank on new approaches to disaster mitigation and insurance in the Caribbean is very relevant, as is the Bank's intention to co-operate with states in the region to develop and support regional risk-pooling arrangements, to complement improved disaster mitigation and prevention measures (for example, in the context of the ProVention Consortium) which can greatly reduce the costs of disasters when they occur. Similar approaches, that build on this experience, should be extended to other areas.

Many small states remain dependent on commodity production, and it would therefore be useful if the International Task Force on commodity price risk management could pay attention to issues and commodities of relevance to small states in its future work. Many small states are exposed to different risks, however – for example, fluctuations in volumes and tourism earnings and different land tenure systems – and these will need a combination of different approaches.

Many small states have vulnerable physical environments as well as vulnerable economies. As development takes place it will be crucial to ensure that it is sustainable, by protecting the environment at the same time. Mistakes have been made in this area, for example in insensitive tourism development and over-exploitation of non-renewable resources. This environmental vulnerability is compounded by the likely impact of climate change for some small states, particularly those in the Pacific. It will be important for donors and international agencies, including the World Bank, to continue to support small states in this regard, both with advice and finance.

Issues of transition to the changing global trade regime

Small states must adapt, indeed transform, their economies to secure the benefits of globalisation and the increasingly open global trading environment – trade policy for small states, as for other developing countries, needs to be seen as part of sound overall economic development strategy. Clear signals about the direction of trade and regulatory policies and the length of transition periods will be needed to guide the process and to attract new investment. Action wherever possible to reduce or remove barriers to small states exports will also be helpful.

The work of the Task Force has shown that many small states will face special difficulties in making this transition and will need time to adjust to changes in the external trade regime, and sequence changes in their economies. The particular vulnerabilities of many small states should be recognised as justifying special consideration to deal with the issues that are crucial to transformation of their economies, including length of transition periods, as the global process of trade liberalisation, and removal of special protective regimes, continues. It would be useful to review the current process of WTO accession as it affects small states to see if the problems and costs these countries face in the process can be reduced.

Another issue related to WTO participation is the lack of adequate resources to participate fully in international trade negotiations. The Commonwealth, through its permanent trade advisers in Geneva and Fiji, already provides assistance of this type to its member countries. It will continue to do so and has expressed a willingness to take a lead in expanding such facilities. The EU is

financing an ACP countries' bureau in Geneva to facilitate relations and negotiations with WTO and UNCTAD. Additional support would be welcome, as is the recent creation of an 'Advisory Centre on WTO Law'. The WTO should examine other ways to help, for example by allowing groups of small states to be represented collectively at discussions where they wish to do so.

Trade liberalisation can have major fiscal consequences for small states. The IMF should continue to take a pragmatic approach to the advice it gives to small states that risk losing a major source of fiscal revenue as tariffs fall, recognising that for some open, small economies low, flat-rate tariffs may be a component of an efficient tax system. However, as small states move to more service-based economies, they will need to adopt broader-based consumption taxes. They will also need technical assistance from the IMF and others in tax administration.

Strengthening capacity

Small states and those providing support for them need to continue to address problems of limited capacity, both in the private and public sectors. Specific issues to pursue in this context include the following:

There is a continuing task of accumulation of knowledge about policies and approaches that work and do not work for small states, and sharing this knowledge and experience among states both within and across regions.

An important approach in tackling limited capacity in small states is to develop regional approaches wherever feasible. The multilateral institutions and other donors should reinforce existing programmes by enhancing their lending and non-lending services to encourage and support such co-operation, particularly by assisting regional organisations dealing predominantly with small states.

To help develop private sector capacity, both regional and country approaches are needed, including providing information to facilitate business decision making, training, and encouraging formation of networks and associations of entrepreneurs. Another aspect of limited capacity where the multilateral institutions can also help is dealing with utilities' regulation and competition policy; issues of considerable importance with the prevalence of monopoly or oligopoly suppliers in small states.

Activities and requirements of a multiplicity of donors place heavy and unnecessary burdens on limited administrative capacity in many small states. This was well illustrated by a recent study by the World Bank Operations Evaluation Department. This problem needs to be addressed by a new approach building on principles of partnership and country leadership that underlie the Comprehensive Development Framework approach. Donors and international agencies should join together country by country, in country-led partnerships to align their objectives, rationalise their support and simplify and harmonise their procedures to reduce these burdens. Helping build country capacity and forging of closer working relationships with regional organisations would help in this regard.

Building institutional capacity needs to be undertaken in close consultation with recipient agencies and tailored carefully to their particular needs. Experience in

the Pacific suggests the need for a long-term commitment by donors to strengthen generally weak institutional and human resource capacity. Further, the design of capacity-building activities needs to be flexible and responsive to a country's needs and political realities.

New opportunities and challenges from globalisation

Some small states will need external support and advice as they seek to reposition their economies. They need enabling environments and the right kind of public policy support – for example in training and education, and creating regulatory frameworks – to encourage new activities, many of which will be in the service sectors. In this context actions in two specific areas will be important for many small states.

One new area in the service sector where some small states have been successful is in the provision of onshore and offshore financial services. Such financial services have come to be of substantial importance to their economies. For a variety of reasons offshore financial centers have come to be a matter of concern to the international community. There is a clear need for improvements in financial operating practices and regulatory standards, and also a need to take action to prevent financial and tax crime and to address concerns about harmful aspects of tax competition. Improvements in these areas can benefit small states as well as reduce risks to the international banking and financial system. Many small states are already co-operating in international efforts to combat money-laundering. Assistance by multilateral institutions and others in strengthening financial sector regulation and supervision will be important. Because of their potential international impact offshore centers are currently the subject of scrutiny by the OECD's Forum on Harmful Tax Competition and the Financial Stability Forum (FSF). This is causing concern for a number of small states because of lack of representation in the OECD and FSF and lack of adequate consultation on the matters being addressed. At the London conference in February 2000, the OECD indicated its willingness to engage constructively with small states on tax competition issues and to respond to their call for a multilateral discussion. It is important for all these issues to be considered in international fora where small states themselves have a voice so that their interests can be taken into account.

Finally, work on the opportunities that information technology and electronic commerce can bring to small isolated states suggests that these technologies can be a major source of help in their development. But success requires the correct public sector infrastructure, crucially a regulatory framework that will deliver high quality/low cost telecommunications services. It is important to note that this provides a challenge in which many small states will need external support from the multilateral development banks and others.

Specific Actions by Multilateral Institutions

The more specific World Bank and Commonwealth Secretariat frameworks set out in Part II of the report focus on knowledge accumulation and dissemination, institutional capacity-building, including support for regional approaches, risk management, and the management of transition.

The World Bank framework centers around helping small states develop and implement effective strategies to reduce poverty by applying the general principles of country ownership, participation, partnership and a holistic approach to diagnosis and policy development to their special characteristics. While the work programmes for small states are prepared in the context of individual country diagnosis and country assistance strategies, the special problems of vulnerability and transition underscore the need to link lending and non-lending services to encourage institutional and policy reform. More specifically, the Bank's framework includes:

- continuing a flexible approach to graduation policy, including from IDA, that takes into account the special circumstances of small states, ensuring that none is graduated prematurely;
- reducing transactions costs for small states by actively promoting better donor co-ordination, and by exploring for small states the full flexibility in the use of its new lending instruments, such as adaptable programme loans (APLs) and learning and innovation loans (LILs);
- supporting private sector development as small states seek to transform their economies in the process of transition and to meet the challenges of globalisation, especially in terms of education and training, creating improved regulatory frameworks, and infrastructure development – and in the policies and investments needed to exploit the opportunities that information technology and electronic commerce can bring;
- supporting regional initiatives as an important way for small states to overcome diseconomies of scale in the public and private sectors;
- helping to lower the costs of natural disasters, including the provision of loans for disaster-proof infrastructure and exploring new approaches to Bank support for risk pooling and disaster insurance;
- in partnership with small states, continuing attention to cross-cutting issues and to accumulating and sharing of relevant knowledge generated within the Bank and outside – using mechanisms such a Bank-wide thematic group, development of a World Bank small states web site, and arranging regular meetings where representatives of small states can share experiences and discuss new developments. These actions will be co-ordinated with existing capacities, such as SIDS/Net, a UNDP-based network, dedicated to small island developing states.

The Commonwealth framework commits to maintain and, where possible, expand overall levels of support for small states development, in terms of both advocacy and provision of technical assistance. In particular, it targets advice on vulnerability and risk management, trade negotiations, capacity-building for regional organisations involving small states, focusing on its preparedness to:

- sharpen its advocacy role and to pursue commitments from the UN system and others to include vulnerability as an additional criterion in determining their treatment of small states on issues such as graduation, aid flows, development

strategies and investment;

- assist in the development of national and regional capital markets, stock exchanges and commodity risk mechanisms;
- take a lead in the strengthening of facilities in Geneva to assist small states in their dealings with WTO, and provide support for these countries in their relations with the EU under the successor agreement to the Lomé IV Convention;
- provide support for capacity-building in regional organisations dealing predominantly with small states;
- take a lead in broadening the Trade and Investment Access Facility to provide policy advice and technical assistance and promote trade-related investment in small states in order to allow them to exploit the opportunities afforded by globalisation;
- explore ways of further expanding the Commonwealth Private Investment Initiative to provide venture capital-type funds and mobilise financial flows to small states; and
- seek agreement on a mechanism to track implementation of commitments and proposals by partner organisations, regarding their treatment of small states.

Partner organisations are also developing their responses toward small states. Part II of the report includes frameworks submitted to the task force by the following organisations: IMF, WTO, EU, UN, UNDP, UNCTAD and major regional development banks. Indications of action by them include:

Eligibility for access to resources under the IMF's concessional facility closely follows IDA eligibility; the IMF will also continue to give countries facing balance of payments difficulties access to the Fund's financial facilities and loans; and a wide range of technical assistance will continue to be provided. The IMF has been consulting with UNDP and other donors on the establishment of a regional technical assistance center in the Caribbean, similar to the one already in place in the South Pacific.

The EU is: financing an ACP office in Geneva to assist member countries in their dealings with WTO; will take into account the dimensions of vulnerability when determining its programmes toward small states; has developed a Disaster Prevention, Mitigation and Preparedness Programme to assist countries vulnerable to natural disasters; is supporting transition of the most banana-dependent economies by improving competitiveness of the banana sector, by creating new activities to replace traditional banana production, by financing new infrastructure and by retraining labour; and is creating a new Investment Facility for the support of private sector development in ACP countries.

Conclusion

Small states share a number of special development challenges in the global economy. The Task Force report, as summarised above, lists ways in which these challenges can be met. In some cases relevant actions are already under way. In oth-

ers the report identifies useful initiatives that should be pursued. And in others the Task Force has been able to do little more than set out issues that should be addressed. The Task Force commends this as an agenda for the future. Tackling it successfully will take a combined effort by small states themselves and by the international community.

Work and consultations of the Task Force

The Task Force's Interim Report was circulated in October 1999. It noted further work to be carried out before production of a final report. The Interim Report was discussed and welcomed in November 1999 by the Commonwealth Ministerial Group on Small States and Commonwealth Heads of Government. The Interim Report was also circulated widely for comment, to small states and development institutions and published electronically.

In continuing consultations, the Task Force received many comments from multilateral organisations as well as from small states, including a substantial written submission from the CARICOM Secretariat. The Task Force has drawn on these contributions as it completed its work. In particular, the last stage of the Task Force's work was guided by the discussions at a major global conference arranged by the World Bank and the Commonwealth Secretariat in London on 17–18 February 2000. That conference focussed on the four areas for further work identified in the Interim Report: tackling volatility, vulnerability and natural disasters; strengthening capacity; issues of transition to the changing global trade regime; and new opportunities and challenges from globalisation. The final report of the Task Force draws extensively on the discussions and conclusions at that conference.

Small States in the Global Economy, Number 44 in the Economic Paper Series, edited by David Peretz, Rumman Faruqi and Eliawony J Kisanga.

The Commonwealth Secretariat/World Bank Joint Task Force on Small States made a series of recommendations in its report published in April 2000. The report sets out an agenda of future national, regional and international actions to help address the special economic vulnerabilities and challenges of small states, and to support their sustainable development. To assist continuing work and debate on these issues the Commonwealth Secretariat is publishing papers presented to the Task Force at its conferences in St. Lucia in 1999 and London in 2000.

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