A Discourse on Debt and Economic Growth
in the Caribbean Community

I.   INTRODUCTION

The management of public debt has become a front burner issue again in the Caribbean Community although not generating the same degree of wide spread public interest as the debt crises of the 1970s and 1980s did. Social governance issues such as crime and security weigh more heavily on the minds of residents.

Among the international donor community, international financial institutions (IFIs) and regional development banks, the main concerns expressed in public are about debt sustainability and fiscal discipline. The belief is that public debt has reached unsustainable levels, resulting in fiscal crises with potentially harmful effects on economic growth. Hardly any attention has been paid to the related issue of the contribution that debt accumulation might make to economic growth.

In this presentation, I engage in a discourse on not only the debt sustainability issue but also on economic growth effects during the stage of debt accumulation.

II.   THE CONTEMPORARY DEBT SITUATION

The Caribbean countries are among the most indebted emerging market countries in the world …….. In general, public debt-to-GDP ratios over 50 to 60 percent are considered high. (Ratna Sahay 2006, page 29).

Data substantiate this compelling observation by Sahay. Ratios of public debt to GDP in 2004 exceed 50 percent in 10 of 12 cases, going beyond 100 percent in six cases. (Details are in Table 1). External debt is a large component of the public debt, and ratios of external debt to GDP tell the same story of high levels of indebtedness. In 2004, most countries fell within a range of 54 percent to 82 percent, and one was as high as 137 percent Only four of the twelve countries were below 50 percent, i.e. Bahamas at 10 percent, Trinidad and Tobago at 13 percent, Barbados at 24 percent, and St. Lucia at 43 percent.

The level of indebtedness had increased remarkably between 1997 and 2004. Only seven countries including Guyana, Jamaica and Antigua and Barbuda were in the heavily public indebted range in 1997. By 2004, Belize, Grenada, St. Lucia and St. Vincent and the Grenadines had joined them, while Trinidad and Tobago had dropped out. With respect to the external debt ratio, only two countries were in the heavily indebted range in 1997 compared with eight in 2004.

Sahay and others attribute this episode of debt expansion to rising interest costs, higher public investments and larger non-interest current expenditures. Interest costs rose partly in line with movement of world interest rates. Even though many of the countries do not have easy direct access to the international private capital market, the IFIs and regional development banks from which they obtain much of their loan resources adjust their own loan rates of interest to the movements of international capital market rates. However, the stronger explanation for the rise in interest costs is the greater recourse of governments to higher price but less conditional and faster disbursed commercial credit from commercial banks operating within the Caribbean. In

most of these cases, the countries substituted commercial credit for IFI and regional bank credit in their debt portfolios, consequently raising the average cost of funds to themselves.

Increases in public investment expenditures and non-interest current expenditures were part of the adjustment policies adopted by some governments to deal with external trade shocks, such as loss of agricultural trade preferences and short term contraction of tourism demand caused by the terrorist attack on the US in September 2001. A further influence is the repetitive occurrence of the tropical storms which depleted capital stock (thereby necessitating replacement expenditures) and engendered income and consumption shocks. In some respects, government expenditures have accommodated the inadequacy of household risk management capacity, reducing the volatility of household incomes and consumption.

III.   THE CONTRIBUTIONS OF DEBT TO ECONOMIC GROWTH

Debt accumulation has been variously motivated. As noted previously, the motives include countering the effects of external economic shocks and natural hazard events. They also include the desire to maintain or increase the level of public consumption in situations of fiscal revenue inadequacy. Another reason is to speed up economic growth and development. The various uses to which debt proceeds may be allocated are sometimes complementary; at other times, they are not.

One channel through which debt accumulation may have aided Caribbean economic growth is by increasing the capital stock per worker. One can employ a Solow-type economic growth model such as the one developed by Milbourne (1991).

Output per worker (y_t) is determined by the production function:

(1) $y_t = a_t f(k_t)$

where **a** is the technical knowledge parameter and **k** is capital stock per worker. The condition for capital use optimization, i.e marginal productivity of capital equals marginal cost of capital is given by:

(2) $a_t f_k(k_t) = r + w$

where $f_k > 0$, r is the real interest rate and **w** is the rate of depreciation.

Capital stock grows according to

(3) $k_{t+1} = k_t + i_t - (w + n) k_t$

where n is the population growth rate.

Aggregate demand must equal supply. Therefore,

(4) $y_t = c_t + i_t + g_t + x_t$

where **c** is consumption, **i** is investment expenditures, **g** is government current expenditures and x is net exports.

In an open economy, net foreign asset accumulation could be represented by

(5) $d_{t+1} = d_t + (\bar{r} - n)d_t + x_t$

where $\bar{r}$ signifies constancy of the real rate of interest and greater or less than depending on whether the economy is a net borrower or net lender.

With simplifying assumptions, the relationship between the savings – investment gap and the steady state level of net foreign assets is:

(6) $d^* = (s^* - i^*) /- (r^- - n)$

In the closed economy $d^* = 0$ and $s^* = i^*$. In the open economy net debt ($d^* < 0$) allows a country to increase capital per worker to a higher steady state level as Figure 1 illustrates.

The closed economy steady state is given at $k = k^c$. Required savings (represented by the savings function, s) equals required investment $(n+s)k$. In the open economy case, domestic savings can be augmented by foreign savings (the savings function is a composite of domestic and foreign savings). If foreign savings are positive, i.e. gross inflows exceed debt service payments, capital stock per head increases from k^c to k^o.

In endogenous growth models of the Lucas-Romer-Barro type, capital stock augmentation would include human capital through public investment in education and training and would include the effect of technical change embodied in new capital goods.

Any reasonable intertemporal utility maximizing model of government debt would predict some allocation (diversion) of debt proceeds to current consumption (Rahaman, 1967). Furthermore, in the conditioning political economy context of competitive party politics, there are strong pressures of contra-cyclical public expenditures, replacement of storm-damaged capital stock and relief from consumption losses associated with natural hazard events. It is not surprising that investment additionality is substantially less than debt accumulation.

There is considerable international evidence to support conjectures that whatever public investment has taken place is likely to have some positive effects on growth and productivity.

Aschauer (1989) presented evidence of strong influence of public capital creation on output and productivity. Kamps (2004) established an average elasticity of output to public investment of 0.12. Khan and Kumar (1997) in a pooled time-series cross-section study of 95 developing countries concluded that, although private investment expenditures have a more substantial effect, public investment expenditures do have positive and significant effects on economic growth. Roache (2007) in a study of ECCU countries estimated long run growth elasticities between 0.06 and 0.08 and marginal productivity of public investment in the order of 0.54 to 0.76.

A problem in some Caribbean countries has been the temptation to take advantage of purpose-unconstrained commercial credit to implement public investment projects of questionable economic growth impact. This has reduced the overall quality of public investment and reduced the economic growth contribution of public debt.

Government foreign debt can also influence economic growth via its effects on domestic savings behaviour. Critical parameters are government propensity to consume debt proceeds, government propensity to consume tax revenues, the tax-GNP ratio, the private consumption-disposable income ratio, and the incremental capital output ratio. (Dacey 1975; Bourne 1981). In the case of Jamaica 1970-1978, government foreign debt exerted substantial fiscal drag on private savings (20-30 percent) and on government savings. Given that tax ratios are not much

lower now than in that period, that government consumption of tax revenues has remained high as has private consumption ratios, and that ICORs do not seem to have fallen substantially in the Caribbean, it would be surprising if the recent period of debt expansion has not resulted in fiscal drag on domestic savings, thereby offsetting some of the positive impact of external debt on national savings and capital formation.

One also has to take account of debt service payments which are competitive with the use of foreign exchange earnings for imports of capital, intermediate and consumption goods and with the use of fiscal revenues for other purposes. In 2004, debt service absorbed substantial proportions (11 % – 22 %) of export earnings in five of 12 CARICOM countries and as much as 51 % in Belize.

IV.   DEBT SUSTAINABILITY

Debt sustainability analysis is a newer version of the older concern with debt capacity. Earlier approaches to debt capacity focused on required debt service payments relative to the govern-ment's capacity to pay as measured by fiscal revenues and foreign exchange reserves or earnings. Reference has already been made to the substantial call on foreign exchange earnings presently made by debt service commitments. Details are available in Table 2 The proportionate claims made on government current revenues are larger.   In 2004, the proportion varied between 17 percent and 30 per-cent in eight of twelve countries and was 76 percent in one country.   In many of them, there was a sharp deterioration in debt servicing capacity (conventionally measured) between 1997 and 2004.

The 'modern' version of debt capacity analysis posits the question of what is the primary surplus (defined as non-interest fiscal surpluses) as a percent of GDP that is required to maintain a constant debt to GDP ratio. If that primary surplus is infeasible, the level of public debt is unsustainable. Analytically, debt sustainability analysis is firmly rooted in the intertemporal budget constraint on government's fiscal activities. The budget constraint requires the primary surplus over time to be no less than the initial debt stock. Drawing on Easterly (2001)

$$(7) \qquad \int_{0}^{\infty} e^{-rt}(T_t + A_t - G_t)\, d_t \geq D_o$$

where T is tax revenues,
A is Net debt inflows,
G is government expenditures,
D is public debt stock,
and r is the discount rate

The steady state condition for its satisfaction is that primary surplus as a percent of GDP (call it p) divided by the discount rate (r) minus the economic growth rate (g) be equal to the initial ratio of debt to GDP, i.e.

$$(8) \qquad p/(r\text{-}g) = D_o/Y_o$$

In accounting terms,

$$(9)$$
$$(T_t + A_t - G_t)\, /Y_t = (r\text{-}g)\, D_t / Y_t$$

is the debt sustainability condition for a given debt ratio.

The required primary surplus varies positively with the discount rate (the average loan rate of interest in practical terms) and negatively with the economic growth rate.

As previously remarked interest rates rose in the period 1997-2004. Furthermore, economic growth rates decreased in several instances (See Table 3). The outcome of these two trends is that required primary surpluses increased thereby creating additional fiscal pressures to which governments have been unable to respond effectively by either raising fiscal revenues or reducing expenditures. In three instances (Dominica, Grenada and Guyana) the contraction of economic growth has been sufficiently precipitate to create acute problems of insolvency.

In Belize, the difficulty lies not in the economic growth rate which remained buoyant but in fiscal incapacity (largely as a result of a narrow effective tax base and expenditure rigidity) to generate the requisite primary surplus once external creditors had suspended debt inflows.

Unsustainable public debts can have negative effects on economic growth. If governments cannot readily lower consumption to make room for debt service payments, but instead resort to domestic borrowing there could be a liquidity squeeze on private sector investment. If there is a contraction of public sector investment expenditures, then overall capital formation is slowed.

In most countries, liquidity in the banking sector and among non-bank financial intermediaries is very high, reflecting the mismatch of lending preferences which militate against long term financing of private investment other than construction and the demand for that kind of loan. It would be difficult in such circumstances to conclude that public debt crowds out private debt for investment purposes.

Expectations of higher future taxes as well as uncertainty are more likely to be disincentives for private investment. A country for this reason can thus find itself in a debt trap situation of high debt and decelerating economic growth.

Especially if the debt unsustainability situation is the result of adverse external economic shocks, including natural disasters, adjustment policies which threaten economic growth or otherwise derail economic growth policies are not an appropriate response. The appropriate lines of adjustment is debt relief through restructurings and write-offs.   In such arrangements, avoidance of moral hazard necessitates conditionalities which ensure reform of fiscal revenue systems and administration, public expenditure policy and debt management. This is the course of action taken by IFIs and the regional development banks in respect of Dominica, Grenada, Belize and St. Kitts and Nevis. Dominica appears to be an emerging success. The jury is out on Grenada. Belize and St. Kitts and Nevis are at the starting point and cannot be judged as yet.

V.   **TOWARDS A CONCLUSION**

The preceding discourse points in the direction of the following conclusions.

1.   Public debt can make significant positive contributions to economic growth.

2.   The positive growth impact is greater, the better the quality of public investment, the greater the complementary of public investment and private investment, and the smaller are the negative effects on domestic savings.

3.   The perceived benefits of the substitution of high interest, low conditionality private commercial debt for low interest, high conditionality official debt might be illusionary.

4.   Debt management to ensure an appropriate balance between debt accumulation and debt servicing capacity is critical. Debt unsustainability, while sometimes due to exogenous shocks, can nonetheless retard economic growth, with the risk of cumulative downward spirals.

5.   Debt management entails attention not only to the terms of debt but to domestic macroeconomic variables such as fiscal revenue capacity, current expenditures and the economic growth rate.

6.   If there are situations of debt unsustainability and crisis, debt relief is the policy response more consistent with the pursuit of economic growth.

TABLE 1: <u>DEBT AS % OF GDP</u>

Country	Total Public Debt as % GDP		External Debt as % GDP	
	1997	2004	1997	2004
Antigua & Barbuda	102	99	60	64
Bahamas	47	46	9	10
Barbados	67	86	16	24
Belize	43	102	34	74
Dominica	62	115	35	73
Grenada	41	129	30	77
Guyana	211	166	204	137
Jamaica	103	139	44	58
St. Kitts & Nevis	86	179	39	82
St. Lucia	35	70	22	43
St. Vincent & the Grenadines	48	79	44	54
Trinidad & Tobago	52	45	27	13

Source: Sahay (2006); CDB (2007)

TABLE 2: <u>DEBT SERVICE RATIOS – 1997 AND 2004</u>

| Country	1997		2004	
	% XGS	% CR	% XGS	% CR
Antigua and Barbuda	2.7	9.8	9.4	28.7
The Bahamas	5.2	12.5	3.4	9.9
Barbados	5.6	9.6	5.5	8.8
Belize	9.0	21.4	50.9	76.3
Dominica	6.7	14.3	11.4	17.0
Grenada	6.0	11.0	11.3	19.8
Guyana	10.5	53.9	7.7	20.2
Jamaica	15.3	28.5	20.4	30.0
St. Kitts and Nevis	4.7	8.1	22.0	28.5
St. Lucia	3.5	8.8	7.8	18.1
St. Vincent and the Grenadines	3.5	8.8	11.5	17.6
Trinidad and Tobago	15.4	32.5	4.6	10.3

XGS   -   Exports of Goods and Services
CR   -   Government Current Revenues
Debt Service -   Interest and Amortization Payments

Source: CDB (2007)

TABLE 3. : <u>ANNUAL GROWTH RATE OF REAL GDP</u>
(%)

Country	Year	
	1990-1997	**1998-2004**
Antigua and Barbuda	3.0	3.8
The Bahamas	0.9	2.8
Barbados	3.4	1.8
Belize	5.7	6.9
Dominica	2.7	0.1
Grenada	2.8	3.1
Guyana	5.9	0.6
Jamaica	1.0	1.2
St. Kitts and Nevis	4.5	2.5
St. Lucia	2.3	1.4
St. Vincent and the Grenadines	3.3	3.2
Trinidad and Tobago	2.0	7.1

Source: Sahay (2006), except for Barbados 1990-1997 which is calculated from CDB data

FIGURE 1: <u>EFFECTS OF DEBT ON ECONOMIC GROWTH</u>
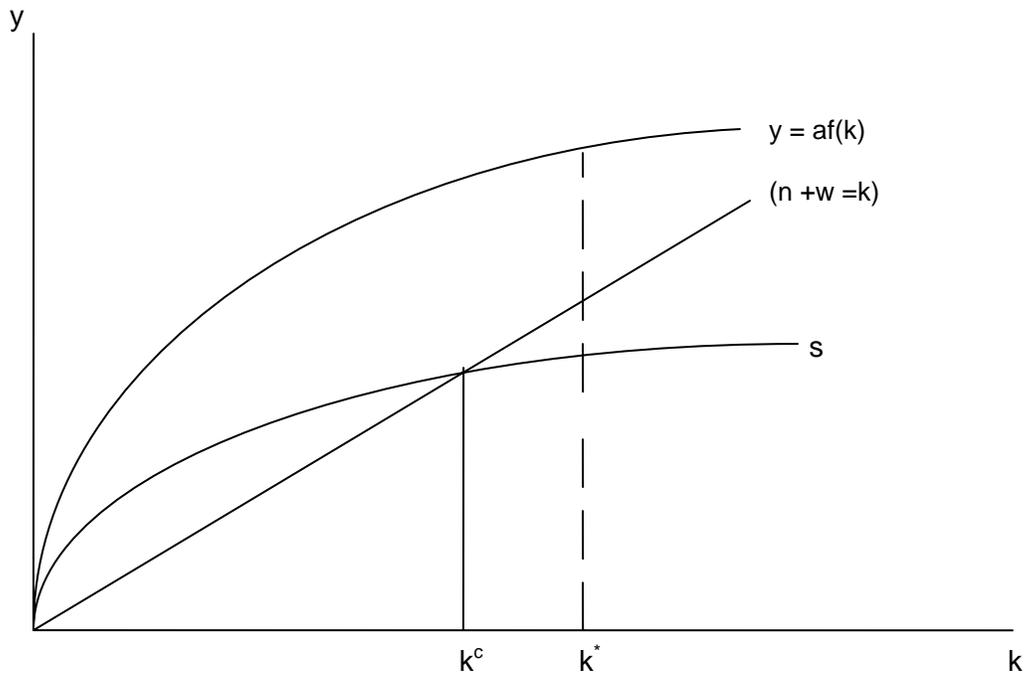
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