

RE3-03-001

**Economic and  
Sector Study Series**

**JAMAICA**

**Fiscal Policy Issues in Jamaica:  
Budgetary Institutions, the Tax System  
and Public Debt Management**

**July 2003**

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**Fiscal Policy Issues in Jamaica:  
Budgetary Institutions, the Tax System  
and Public Debt Management**

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**Regional Operations Department 3  
Country Division 6**

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## *Executive Summary*

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Jamaica had a poor growth performance during the 1990's, but managed to reduce the inflation rate to a single digit and to serve regularly a huge public debt of about 130% of the country's GDP. This high indebtedness was in part a consequence of the financial crisis of the early 1990's and led the government to change its policy mix so as to achieve a primary surplus in the range of 10% of the GDP.

Tight monetary policies and a high public debt had pressured real interest rates and required enormous primary surpluses to reduce the Debt/GDP ratio. Jamaica seems to be trapped by low growth, a debt overhang and a politically costly high primary surplus.

In this paper we analyze budgetary institutions, the tax system and public debt management in Jamaica. We explore the nature of budget institutions and design, beyond formal administrative or budgetary procedures, to address the question of whether the demanding fiscal path Jamaica is following can be put to risk by flaws in the institutional framework governing fiscal policies. Then we analyze the requirements for achieving revenues through a tax system that does not distort resource allocation and is complementary to the growth strategy. Finally, we address debt sustainability questions under different assumptions and look at debt management within a comprehensive fiscal policy assessment and at the path of public expenditures, primary surpluses and potential debt expansion.

Good fiscal institutions together with other structural reforms (e.g. good banking regulation) will help to reduce real interest rates and foster growth. Medium-term growth depends on investment and productivity gains. Macroeconomic data for Jamaica points to relatively high investment levels but of low productivity, at least by looking at the recent growth performance of the country. A flawed tax system may be one reason for low productive investments.

Fiscal policy may help to achieve higher growth by reducing the burden of the public debt and then real interest rates, by improving the allocation of investment through a better tax system, and by reducing macroeconomic volatility through a prudent behavior of primary government expenditures.

### *Budgetary institutions*

Jamaica has sound fiscal institutions and this has been captured by previous comparative studies on budget institutions in Latin America and the Caribbean. Constitutional provisions work effectively in creating an environment for fiscal control by making debt service mandatory as the first charge on resources and by giving a centralized role to the Ministry of Finance. Even though there have been interesting findings and useful recommendations that have stressed the role of cash management and some strategic aspects of the design of the budget process, these seem relatively marginal improvements and do not involve major designs that can be judged to have an impact on fiscal outcomes since they do not necessarily involve major improvements upon existing institutions that

tackle the fundamental problems of incentives for the control of expenditures and deficits (or primary surplus generation) within an efficient running of public sector activities.

In spite of this good institutional design the public debt is too high. There are some other aspects that come under two major headings that are, first, improving accountability and transparency and, second, exploring ways of improving existing institutional arrangements in some new dimensions to cope with sudden or unexpected u-turns in performance.

First, and from a point of view of accountability and transparency, the main apparent weakness of the budgetary process in Jamaica is that the public sector enterprises and other fiscal operations that fall outside Central Government do not allow an easy consolidation of public accounts to assess fiscal performance. Given that public entities are not integrated in the budget process in the same way as ministries and agencies and that the information on non Central Government accounts is not obtained from the Budget Memorandum, there is a case for extending the hard-budget-constrain institutional setting to the rest of the public sector. This needs to be assessed through a careful design analysis, encompassing regulatory reform on public services that does not conflict with efficiency objectives of decentralization and arm-length relationships. Further steps in the same direction have to do with efforts to make budget executions to be consistent with approved budgets and with improvements in formal budgetary procedures that have been stressed by other recent evaluations by multilateral agencies.

Second, the evaluation of fiscal institutions and fiscal outcomes in Jamaica shows an obvious stress between strong fiscal institutions and rocketing deficits and debt accumulation that come from hidden liabilities outside formal budget allocations and take the form of fiscal liabilities surprises. There is, then, a twofold objective of fiscal consolidation and of avoiding future fiscal surprises. Our recommendations are:

- a. The design of additional explicit fiscal rules that act as constraints that insulate or insure fiscal outcomes from fiscal surprises. While the case for explicit rules may not be clear for fiscal consolidation if existing institutions generate good results, the point is rather if the introduction of explicit rules make fiscal results more sustainable and act as an insurance against adverse shocks. Fiscal responsibility laws that set the path of fiscal deficits and public debt appear to be the main candidates for consideration.
- b. The design of contingency funds able to cushion external shocks or to absorb the impact of fiscal surprises through hidden liabilities. Since the problem of Jamaica is more related with relatively sudden fiscal liabilities surprises rather than with cyclical stabilization, contingent funds are needed.
- c. The introduction of accrual accounting in the budget process that takes into consideration potential liabilities. This has been recognized by the multilateral institutions for transparency reasons and as a move toward a system of commitment-based accounting. From a fiscal policy perspective it allows a correct treatment of



hidden liabilities and makes fiscal outcomes more predictable and therefore controllable.

*The Tax system*

Tax revenues have increased from about 23% of the GDP in fiscal years 1996/97 and 1997/98 to about 25% of the GDP in the following three years and are expected to yield 26.5% in 2002/03. This increase in tax revenues has been accomplished because of higher excises and a better revenue performance in the taxation of income and profits. In a highly indebted economy growing tax revenues are an encouraging fact.

However, the design of the tax system can be improved substantially. In the case of the General Consumption Tax (GCT) [the Jamaican Value Added Tax (VAT)] there are several tax rates and exemptions that cannot be explained for equity reasons. Zero tax rates are used not only for exports but also they are extended to goods sold in the domestic market (some foodstuffs, health products, printed matter, some agricultural products, international freight, some sport equipment and energy saving devices). Exemptions go beyond which is customary in other countries including not only education, health, financial services, cultural activities and transport but also some food, some coffins, ice, some construction, some body care and some medical services. Finally, vehicles are taxed at rates that go from zero to 177%.

The consequence of this anarchy in tax rates is that relative prices of goods and services are distorted. There are differences in VAT taxation according to who is the final user and for different products.

It is likely that loopholes in the VAT have an important fiscal cost but this is not being estimated by the government of Jamaica. It is also likely that a large fraction of this fiscal loss benefits medium and high income families.

The same conclusion can be obtained from the several and generous investment incentives embedded in the Corporation Income Tax. Most firms can enjoy partial expensing of investment (20%) that reduces the effective tax rate from 33 1/3 % to 26 2/3%; and some sectors are allowed to use accelerated depreciation schemes and a 20 to 40% investment tax credit. Moreover, as nominal interest payments are allowed to be deducted from the income tax base and not all interest accrued to families is taxed, there is a subsidy for debt financed investments when there is inflation. As a consequence, the allocation of capital is heavily distorted by the income tax rules. For example, to achieve a net of tax 10% real return a firm using equity in an activity with no special breaks needs to obtain a gross of tax return of about 14%, while firms investing in the activities that can enjoy tax credits if they use debt to finance the investment they may have a negative gross of tax return of 10%. The difference is the “contribution” of a silent partner, the government, that pays through the tax incentives a substantial fraction of the cost of the investment and demands no return.

This favorable tax treatment of capital income together with the existence of labor taxes are difficult to justify in an economy with a 15% unemployment rate.

Special excises fall on the consumption of cigarettes, fuels and alcoholic beverages. There are no big distortions in the taxation of fuels and cigarettes, but taxes on beverages penalize beer and wine which are relatively overtaxed given their lower alcohol content than spirits.

Our recommendations are:

- a. Include in the budget estimates of the fiscal cost of tax loopholes and incentives to investment, trying to determine their impact on the distribution of income.
- b. Abolish the investment tax credit (named the Investment Allowance) and accelerated depreciation. If the government wants to maintain some incentives to investment a partial expensive of investment (like the Initial Allowance) is better.
- c. Tax all interest income earned by families.
- d. Move towards a uniform VAT with few exceptions and introduce special subsidies to the poor to compensate them for the higher prices of foodstuffs and other goods that a generalized VAT will create.
- e. Tax alcoholic beverages according to their alcoholic content, eliminating the bias in favor of some spirits.

#### *Fiscal performance and public debt sustainability*

The primary surplus of the Central Government has moved back to double digit in 2000 and 2001 as a response to a high and growing public debt. As of March 2002 the public debt was 133% of the GDP. The financial crisis of the 1990's reversed the declining path of the public debt that was observed in the first part of that decade.

A high debt introduces uncertainty in tax rates because the government may be tempted to increase taxes to improve its primary fiscal position and puts pressure on the interest rate reducing investment and durable consumption.

Half of the debt is issued in foreign currency. Therefore, when macroeconomic reasons demand a weaker real exchange rate the burden of the public debt increases.

The amortization profile for the next five years averages about 13% of the GDP. Together with an interest burden of 12% of the GDP this creates a debt service requirement of a fourth of the GDP or a 100% of tax revenues. This is relatively high for a developing country and creates a liquidity risk.

Traditional exercises of debt sustainability estimate the required primary surplus to maintain constant the ratio of public debt to the GDP. They also assume that debt with multilateral agencies and bilateral sources can also be maintained as a fraction of the GDP. And they ignore that in countries exposed to natural catastrophes the government may face from time to time extraordinary requirements of funds that need to be self insured during the normal years. In the case of Jamaica the public debt needs to be

reduced as a fraction of the GDP, the exposure with multilateral and bilateral sources that accounts for 27% of the GDP will need to be gradually reduced and there is an extra requirement on the fiscal position to create a fund able to self finance the burden on the government of natural catastrophes.

This suggests that two digit primary surpluses will be needed in the next years. Jamaica needs to escape from the “debt trap” and this requires lower interest rates and higher growth. Neither of these two objectives will be achieved without effort. As mentioned before, structural reforms are the key to move towards those objectives; fiscal policy may help to achieve higher growth by reducing the burden of the public debt and then real interest rates, by improving the allocation of investment through a better tax system, and by reducing macroeconomic volatility through a prudent behavior of primary government expenditures.

## ***Introduction***

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Jamaica has been going through a substantial switch in its macro-policy mix in the last three years as the country decided to pursue a strategy to solve its high level of indebtedness and to resume growth from continued stagnation. The aftermath of a severe financial crisis, rooted in unsustainable policies, showed how failures in financial sector governance can create huge public sector liabilities in an otherwise seemingly manageable fiscal policy environment. As a result of the crisis, the Government of Jamaica decided to produce a two digit level of primary surplus as a percentage of GDP that is not only unprecedented in the region but calls attention upon the requirements for its sustainability. This paper deals with three issues of fiscal policy in Jamaica that are related to the challenges faced and at the same time takes notice on the institutional framework so as to avoid reproducing policy mistakes that led to big surprises in the public sector balance sheet. The first chapter explores the nature of budget institutions and design in Jamaica, beyond formal administrative or budgetary procedures, to address the question on whether the demanding path Jamaica is following can be put to risk by flaws in the institutional framework governing fiscal policies. The second chapter pertains to the requirements for achieving revenues through a tax system that does not distort resource allocation and is complementary to the growth strategy. Finally, the third chapter addresses debt sustainability questions under different assumptions and looks at debt management within a comprehensive fiscal policy assessment and at the path of public expenditures, primary surpluses and potential debt expansion.



# ***1. Budget Institutions and Fiscal Policy in Jamaica***

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This part of the report deals with fiscal or budget institutions in Jamaica with a focus on their current working, their relation with fiscal outcomes and the scope for consolidation towards a credible fiscal policy. First, we start summarizing relevant conceptual issues on fiscal institutions and fiscal outcomes. Second, we proceed to characterize institutional aspects in Jamaica that determine budget and financial procedures and rules. Throughout the report we make an effort to characterize Jamaica's specificity concerning fiscal outcomes and to obtain conclusions that suggest the consolidation of credible fiscal institutions.

## **1.1 Fiscal Institutions and Fiscal Outcomes**

During the last fifteen years, the analysis of the determinants of fiscal outcomes has increasingly paid attention to the political and institutional framework that determines fiscal policies. Both analytical and empirical studies, as well as policy-oriented evaluations of many countries have established a firm relationship between fiscal institutions, budgetary procedures and fiscal outcomes.<sup>1</sup>

One of the main contributions of the analysis has been the characterization of the incentive problems that exists in weak institutional settings, where decentralized decisions without proper rules or procedures create incentives for overspending and deficit bias. This is the so-called 'common pool' problem approach, a term borrowed from the literature on competitive or multidirectional externalities that exhaust natural resources. In this setting individuals or actors perceive the full benefit of their action while common property dilutes the costs among all participants. This asymmetry when translated to fiscal policy implies that the absence of rules or of coordinated procedures create a bias toward spending by decentralized decisions that do not fully internalize the costs, leading to inefficient fiscal outcomes. Thus, the approach has general implications on the characterization of the nature of institutions and outcomes: there is a need of both institutional and procedural arrangements to constrain or eliminate those incentives. In this regard, explicit fiscal rules or budgetary procedures that lead participants in the budgeting process to internalize the costs of budget deficits will lead to more efficient fiscal outcomes.

Several dimensions of the analysis have been introduced to characterize the nature of fiscal institutions. Among the more relevant are the concepts of fragmentation, centralization and transparency. Fragmentation occurs when there are many actors in the budget process and when the decision-making process diffuses power among those participants. Centralization of the budget process involves institutional provisions that are

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<sup>1</sup> For a good summary of the literature see IMF (2001 b) and the volume edited by Poterba and von Hagen (1999).

conducive or equivalent to partially or fully internalizing the costs. Transparency means budget procedures that provide clear information on all aspects of fiscal policy.

These dimensions are obviously interrelated among them and serve to initially characterize fiscal policy.<sup>2</sup> At one extreme a too fragmented and unconstrained decision-making process in fiscal policy will lead to deficit bias. A move towards centralization appears then as one correction of the problem that can be achieved in different forms. First, limiting the number of actors in the budget-making process. Second, by centralizing budgetary authority to a ‘responsible’ party or so-called ‘fiscal entrepreneur’. Third, by implementing decision making rules and or cooperative budget procedures among the relevant participants in fiscal policy and budget determination. While the first and second are obvious, the third avenue accepts the need for decentralized expenditure but constrains decision making by rules or procedures. In this last respect, both rules and procedures are in this terminology associated with a move towards centralization, although they are different in so far as they involve explicit targets in the first case that may be preferable when transparency considerations are introduced into the picture.

Precisely, transparency is a critical aspect when centralization is considered in fiscal policy.<sup>3</sup> In the fragmentation environment, transparency is less important: budget procedures can be fully transparent and still show a serious bias towards deficits as the fundamental problem is more with incentives than with information. This may be qualified by the fact that non-transparent procedures compound with incentive problems in too fragmented environments. But the demand for transparency is higher under centralized decision making. Transparency goes beyond full release or availability to the public and participants or evaluators of the policy making process. Budgets that include numerous special accounts and that fail to consolidate all fiscal or public sector activities into a single bottom line measure are not transparent per se. Thus, within transparency assessments it has been customary to include the scope for hidden liabilities and the borrowing autonomy of other public agencies.

Several empirical works and policy-oriented case studies have focused on these issues in practice (see Poterba and von Hagen, 1999). These studies can be separated between cross country assessments of fiscal outcomes that are explained by variables selected to approximate fiscal institutions, and case studies that focuses on specific issues at much more detail in particular countries. Earlier studies of the relationship between fiscal institutions and fiscal outcomes have tried to develop summary indexes of fiscal institutions in order to explain fiscal performance measured as deficits or debt accumulation. For the EU, von Hagen (1991,1992) and von Hagen and Harden (1995) found a significant impact of a comprehensive index of budget institutions on deficits and debt ratios.

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<sup>2</sup> See Poterba and von Hagen (1999) “Introduction”, Alesina and Perotti (1999). See also Kontopoulos and Perotti (1999) on fragmentation.

<sup>3</sup> See Alesina and Perotti (1999, section 1.5 pp.25-27) on transparency. They recognize three strategies to increase transparency based on a “legalistic” approach, on the use of legislative bodies and on the use of non-governmental or private party.

This methodology was extended for Latin America and the Caribbean in studies performed within the IADB research department. Alesina et.al. (1996) developed an index of budgetary institutions in 20 countries of the region in 1980-92 and related primary deficits or surpluses with the index.<sup>4</sup> Stein et.al. (1998), evaluated the interaction between electoral systems, budget institutions (using the previous index for 1990-95) and the outcomes of fiscal policies going beyond previous attempts in considering the relationship between the Public Debt and GDP (or fiscal revenues) as well as the degree of pro-cyclicality of fiscal policy and the size of the government. Both studies reinforce the idea that fiscal institutions matter for fiscal performance, even though the methodology has some problems regarding the assumed substitutability among different components of the index, the limitation to capture country specificities and (in the case of Alesina et.al. 1996) the use of primary deficit or surplus that neglect debt ratio dynamics.

It is interesting to notice that among the 20 countries considered in the index, Jamaica performed first (in Alesina et.al. 1996) and second (in Stein et.al, 1998), above Mexico and Chile, indicating the strongest budgetary institutions in the region.<sup>5</sup> See Figure 1.1. Electoral and political institutional variables (such as the number of effective parties, and the percentage of government seats in Congress) in the Stein et. al. (1998) paper contributed to fiscal performance. At the same time, also in Stein et.al. (1998), while Jamaica fitted well in the regression line explaining budget surplus from the index, it was an outlier in the regression line explaining the public debt-revenue ratio, showing higher indebtedness than that predicted by the index. In Table 1 (taken from the data appendix of Alesina et.al. 1996) we show the structure of the questionnaire for the index of budgetary institutions and the partial and total absolute and relative performance of Jamaica in the questionnaire.

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<sup>4</sup> The index was built from data obtained from a questionnaire answered by budget authorities that contained ten questions. Replies were ranked from 0 to 10 according to a separation between collegial (or fragmented) to hierarchical (or centralized) budget procedures. See Table 1 above in the main text. The first three questions of the index relate to constraints on the budget deficit (the existence of constitutional constraints, the importance of a previously approved macroeconomic program and the degree of borrowing autonomy, respectively). Question 4 relates to the degree to which institutions are hierarchical or collegial during the budget preparation stage. Questions 5 and 6 reflect the relative power of the government and the legislature during the discussions of the budget (legal constraints on congress' authority to amend a budget proposal and options available to the government when the budget is reject by congress, respectively). Question 7 relates to budget amendments and who commands the initiative or supervision. Question 8 asks whether the government can cut spending after the budget is passed (here the interpretation is that both extremes, i.e. "at discretion" and "no", show weak budgetary institutions, while rules such as the dependency on revenue performance are better). The two final questions relates to transparency, in particular whether the control of central government over its budget can be undermined by the behavior of other public agencies in particular in relation to debt guarantees and borrow limits in agencies or local government.

<sup>5</sup> Jamaica performed the questionnaire (see previous footnote) with the highest grade in questions 2, 4, 6 and 8 and had a rather lower (relative to the top group) grade in questions 5, 9 and 10. See Table 1 above in the main text for a summary of Jamaica's performance in this comparison.



Figure 1.1

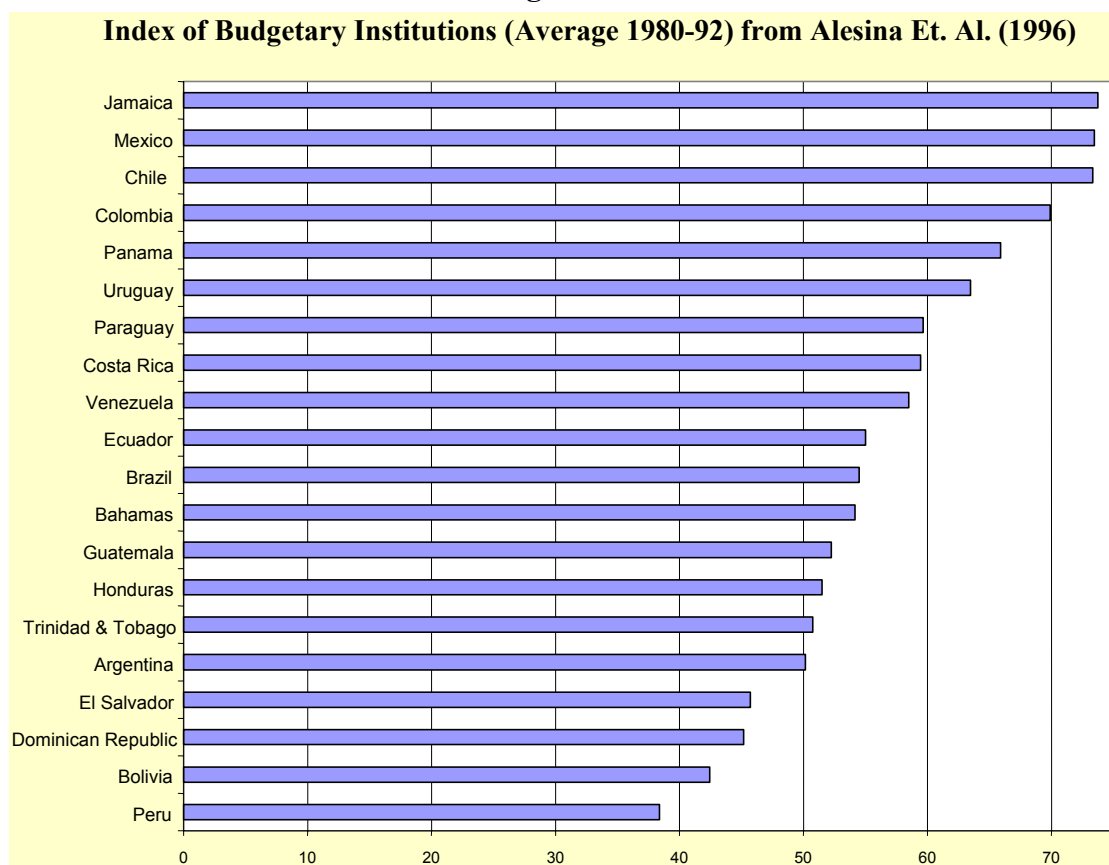


Table 1. Jamaica : Performance from a Questionnaire on Budget

	Variables	Range of Grade	Jamaica's Grade	Performance
1	Constitutional constrains on the fiscal deficit	(0-5)	5.00	1
2	Macroeconomic program as a prerequisite for submission to congress	(0-10)	10.00	1
3	Government borrowing authority	(0-10)	6.66	7
4	Authority of Minister of Finance relative to spending ministers in budgetary matters	(0-10)	10.00	1
5	Legal constrains on congress' authority to amend the gvt' proposed budget	(0-10)	5.00	11
6	Options available to the gvt when its proposed budget rejected or not passed by congress	(2-10)	10.00	1
7	Flexibility to change budget approval	(0-10)	7.50	2
8	Govt's ability to cut spending unilaterally after passage of the budget by congress	(0-10)	10.00	1
9	Does the govt. assume debt originally incurred by other public entities?	(0-6.66)	3.33	8
10	Borrowing autonomy of state and local governments, and of public enterprises	(0-10)	6.25	4
<b>Total</b>		<b>(2-91.66)</b>	<b>73.74</b>	<b>1</b>

Source: Alesina et.al. (1996)

The evidence for developed countries is broader in both types of studies and point to the importance of centralization, through the role of the executive and the use of rules. Kontopolus and Perotti (1999) study the relation between political factors, procedural factors and ideology in OECD countries. They pay attention to fragmentation of the budget process measured by the numbers of participants involved in the deliberation that ultimately determine the budget. They find this dimension to be an important determinant of outcomes, together with political factors and ideology, such as the orientation of the party in power.

The importance of a fiscal coordinator or entrepreneur has been stressed by many studies. Halberger and Von Hagen (1999) studied in detail the interplay between electoral systems, cabinet negotiations and budget performance in current members of the European Union between 1980 and 1994 and found that two important mechanisms, such as the delegation of decision making powers to a strong finance minister and the explicit commitment to fiscal targets, have contributed decisively to the reduction of fiscal deficits.

The number of sub-national governments in large federal states has served the purpose of assessing fiscal institutions vis-à-vis fiscal outcomes. Poterba (1994, 1996, 1997) looks at the effects of explicit rules such as balance-budget rules and restrictions on debt issuance in US states and find that changes in budget rules and broadly defined fiscal institutions do influence fiscal outcomes. Bohn and Inman (1996) also use US state data to find that the most effective rules for fiscal outcomes are constitutional (as opposed to statutory) requirements that apply to end-of-year balance, rather than ex-ante budget requirements, that are enforced by an independent supreme court. Another subject of interest have been the effects of fiscal institutions on borrowing cost. In particular, Poterba and Reuben (1999) find that those states with tighter anti-deficit rules and restrictions on debt issuance face a lower cost of capital. A test on the effects of tax and expenditures limits was performed by Eichengreen and Bayoumi (1994), finding a decline of nearly 50 basis points in the cost of capital. Finally, US states data has been used to obtain results that could shed light on the likely negative effects of balanced budget rules on the stabilization of output fluctuations. Here the intuitive result that balanced budgets are most effective for sub-national governments, since they do not interact with business cycles, seems to be supported by the data.<sup>6</sup>

Other case studies have called the attention on the variety of fiscal procedures and the difficulties with simplifications made in cross-country comparisons. Haan et. al. (1999) perform case studies on budget procedures in several European countries looking at more detailed data and environments where fiscal policy is performed. They look at the link between procedures that lead to the formulation, approval and implementation of the budget and fiscal policy outcomes. They find that budget institutions have many dimensions and that it is difficult to establish which budget procedure has the greatest

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<sup>6</sup> Bayoumi and Eichengreen (1995), Alesina and Bayoumi (1996), Levinson (1998) and Corsetti and Roubini (1996) contribute to this debate with different arguments and or empirical results.

effect on policy outcomes. However the results suggest that the position of the finance minister in the budget process and the presence (or absence) of bidding constraints are highly significant in determining the level of budget deficits.

While the general implications of the common pool approach are clear enough regarding the requirement to solve incentives and coordination failures among different participants, it leaves open the question of whether explicit rules restricting outcomes or procedural design of the budget process (that reallocate authority and facilitate agreement) are the best way to improve fiscal performance. As it appears from recent studies, this question has not been answered for one or other alternative. The preference for explicit (constitutional or statutory) fiscal rules (such as balanced-budget controls, debt restrictions and expenditure limits) is based on the view that constitutional design or political transaction costs make procedural rules difficult to design and enforce.

However, recent studies such as Kennedy and Roberts (2001) have argued that rules are not per se a necessary condition for good fiscal outcomes since these can be, and have been, attained in contexts without explicit fiscal rules. They use the evidence from many developed countries to look at the performance achieved under fiscal rules and the case of Canada as an example of fiscal consolidation without explicit rules at the Federal level.<sup>7</sup> According to their view the real test for rules (i.e. recessions) has not taken place in some cases (such as the US) or has given rise to reversals (e.g. Japan). They do not mean that rules are not useful but rather question the view that they are sufficient to implement good fiscal outcomes.

These studies cannot be taken as an argument for not using rules, but rather that good institutional design may be equally effective, provided there is scope for improvements in this dimension. In any case, it should be clear that the distinction between explicit rules and procedural design is not a debate on centralization (since, as defined before, they both imply solving a coordination failure) and does not challenge the evidence in favor of a strong executive role surveyed before. The relevant question, rather than explicit rules vs. procedures, is whether countries with given institutions and budget procedures can improve fiscal outcomes introducing explicit rules. And for many cases the answer seems to be positive.

There are other lessons from the studies on fiscal institutions and fiscal outcomes that deserve mentioning. First, effective institutional design of the budget process to reduce spending and deficit bias should promote a comprehensive view of the costs and benefits of public policy. If centralization is followed, objectives of the department or ministry in charge should be general and not particular (i.e. concerned with partial objectives or sectors). If centralization relies heavily on common agreements the key is to agree early in the budget process, and mechanisms to enforce agreement or cooperation should be

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<sup>7</sup> In fact Canada has balanced budget rules and expenditure limits at the sub-national level, even though the brunt of the fiscal consolidation efforts of the 90s felt on the Federal Government. Throughout this report, it is important to separate the discussions and arguments that are directed at national levels from those related to sub-national levels and fiscal federalism. This later will not be considered insofar because it is less relevant for Jamaica.

effective (i.e., punishment for violations, limits on parliament amendments and a strong monitoring position of the Treasury in budget implementation to prevent other participants from renegeing). Second, the evaluation of fiscal institutions should take note of the richness of budget institutions by looking at the entire institutional environment and budget process rather than focusing on the existence or absence of particular rules. As implied in the foregone discussion on centralization, there is an intimate connection between fiscal institutions such as the design of the budget process and other dimensions of the country's constitution such as the position of the executive relative to the legislative, the type of electoral law, etc. Budget institutions that work in one constitutional context may fail in others, because of incentive or coordination failures.

To sum up, many years of aggregate and detailed studies of fiscal policy performance show that sustainable fiscal outcomes depend on the quality of fiscal institutions to solve incentive problems with overspending, weak revenue collection and deficit and debt bias. Centralization cum transparency of the budgetary process seems crucial to improve and sustain fiscal outcomes. Thus any evaluation of fiscal institutions in countries when fiscal performance is under stress (i.e. there is a need for fiscal consolidation) or need to be sustained, should look first at this dimension within a general assessment of constitutional design and political and policy procedures. Beyond this general guidance there is an open debate on the effectiveness of explicit rules that try to constrain outcomes versus the design of procedures that constrain decisions. Rules may seem preferable when procedures cannot be constrained and procedural or institutional design may be required when rules cannot be enforced. But in any case the rules vs. procedure dichotomy should not be exaggerated and instead should be read in a complementary manner within a broader view of fiscal and policy institutions and the specificity of fiscal problems and outcomes of the country.

Previous summary and comparative assessments of budgetary institutions in Jamaica show one of the strongest institutional settings in the region. Only the question of amendments of the budget and the constraints on debt originated outside the central government appear as yellow lights in the previous summary assessments. In the next section we summarize fiscal institutions and formal budgetary procedures in Jamaica in order to go into the fiscal institutional framework in more detail.

## **1.2 The Institutional Fiscal Framework in Jamaica**

From the historical path of British colonial power and then from Commonwealth membership, Jamaica is a Parliamentary representative democracy- based in common law- where the executive is an extension of parliamentary representation formed by the party or coalition that controls government. In this sense the constitutional framework constraints certain budgetary procedures to obey the rule of Parliament. However, this does not mean per se that the executive has no leading role. On the contrary, the legal details and budgetary procedures in the case of Jamaica show a quite strong leadership by the executive and, in practice, a "top-down" budgetary procedure that prevails over any seemingly "bottom up" elements. In this context, the ability of the executive to constraint expenditures through cash limits is what has produced an astonishing level of primary

balance since 1999, based upon a constitutional mandate to put debt service in the first line before other expenditures. A different question is whether this strategy is sustainable, in particular in the medium term and under different political configurations. That is, whether the normal working of the public sector can be based on explicit and constrained mechanisms (being explicit laws or alternative institutions) that will produce desirable and sustainable fiscal outcomes under different shocks.

### 1.2.1 Legislation

The main pieces of legislation for fiscal institutions in Jamaica are the Constitution and the Financial Administration and Audit Act (FAA). Other Acts such as the Loans Act, The Approved Organizations Act and the Public Bodies Act complete the institutional framework although are less fundamental to the determination of fiscal policies. Finally, Jamaica has no explicit fiscal rules in the form of fiscal responsibility laws that constraint deficits or debt, even though as we shall see there are others constitutional or institutional provisions that strongly promote centralization and constrain fiscal outcomes, and this framework can easily accommodate further explicit rules in case they are considered.

Chapter VIII (Finance) of the Constitution has nine sections, five of which has direct implications for fiscal institutional design. Section 114 of the Constitution establishes the creation of a Consolidated Fund and prepares the setting for a centralized control of fiscal policy. Section 115 gives the executive branch represented by the Ministry of Finance and Planning (MOFP) the responsibility for the preparation of the Budget and the establishment of cash limits according to an initial and general plan and, at the same time it separates and requires estimates from statutory (mandatory and in the first line of disbursements) and non-statutory expenditures. Section 116 deals with the authorization of expenditures, through an Appropriation Bill instrument, giving the House of Representatives the only power to authorize the appropriation resources for non-statutory expenditures. At the same time section (4) of Section 116 defines statutory expenditures and states that interest on debt fall in this category. This determines much of the fiscal process in Jamaica, since debt interest currently represent a high percentage of expenditures. Section 117 deals with the actual authorization or release of funds from the Consolidated Fund through the issue of warrants that falls under the exclusive control of the MOFP. Finally, Section 118 authorizes the creation by law of Contingencies Funds that fall again under the management of the MOFP. Even though Jamaica has no explicit fiscal rules, in our opinion this last instrument can be seen as a potential legal platform for the establishment of explicit fiscal rules such as a fiscal stabilization fund or a contingent fund that insulates the economy from external shocks.

The FAA gives the legal framework for the management of the funds appropriated by the House of Representatives. This management falls strictly on the MOFP who also has legal power to amend the FAA with approval of the Cabinet. Thus the FAA is the operating extension to the sections of the Constitution that reinforces the centralized control of fiscal policy in Jamaica. Sections 3 to 8 of the FAA deal with the management of consolidated fund accounts. Section 9 is devoted to the issues of warrants establishing the full control of the MOFP. Section 13 deals with the establishment of contingencies funds.

## 1.2.2 Budgetary procedures

The role of the MOFP through its divisions is central to the budget cycle (with the fiscal year running from April to March) with stages of formulation, allocation, authorization, implementation and monitoring.<sup>8</sup> The formulation starts (usually in September of the previous year) from a macroeconomic framework and policy targets and priorities for sectoral allocations. From this blueprint the MOFP issues a budget call to ministries and departments, subject to the payment of statutory expenditures (where public debt service is the major item, from section 116 of the Constitution) and to expenditure ceilings that are established on given priorities and on a historical basis. Ministries and department are given about two months to reply to this budget call. In a separate way, public entities submit their proposal through a corporate plan and, in particular, public enterprises observe parameters for their expenses at this stage.

The allocation of expenditures follows a separation between recurrent and capital expenditures, which observe different allocation criteria. In practice allocation is constrained by statutory obligations on debt service cum macroeconomic policy considerations, resulting in effective ceilings. Recurrent expenditures (where interests, wages and operating expenses or programs are major items) are determined by commitments to statutory expenses (debt service) and by expenditure ceilings based on current macroeconomic policy and government priorities. Capital expenditure allocation depends on projections for the public sector investment program, counterpart multilateral funding and commitments to projects already started.

The budget authorization stage starts with a discussion period after receiving submissions from ministries and departments. This discussion within the MOFP (Budget Division and other divisions and agencies) and with other ministries results in a draft budget with details, evaluation and recommendations that is submitted to the Cabinet. After approval this is then submitted to Congress (in March), where the Standing Finance Committee studies the Budget. The Minister of Finance opens the debate and the resulting Appropriation Bill, which authorizes expenditures, is discussed and approved between 2 to 4 months within the fiscal year. Meanwhile a carry on budget that operates like an advance for on going activities is in place. Another point concerning budget authorization is that the budget of Public Enterprises is not debated because they are self-financed. The World Bank (2001) CFAA report notices the delay in the budget estimates for public enterprises and suggests a partial coverage and follow up of public enterprises by the MOFP due to lack of human resources. In fact, non central government accounts are not reported in the budget memorandum and this reduces the visibility of public sector operations and performance. Furthermore, the problem with the argument that the budget of public enterprises is self financed is that it may not act as an effective budget constraint if the central government can be made responsible for debt or other hidden

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<sup>8</sup> The basic description of this process is taken from a recent World Bank (2001) Country Financial Accountability Assessment (CFAA) report. Comments and analysis for the purpose of this report are included and are of course our own responsibility.

liabilities that give rise to write-offs. As we have seen before, Jamaica scores far less well (than in other dimensions of budget institutions) when constraints on debt and borrowing autonomy are considered. On the other hand debt accumulation in Jamaica in recent years is explained by ‘off budgetary’ processes originated in the financial crisis.

The issue of amendments to the Budget in the process of authorization has been the concern of study of budgetary institutions. This has been detected as the weakest grades of Jamaica (together with the above mentioned case of debt restrictions, in an otherwise high index of budgetary institutions reviewed before) when a question is posed on the existence of restrictions on the contents of amendments. Nevertheless, the absence of hard restrictions is the result of Jamaica being a parliamentary democracy, and the rule of Congress, and therefore should not be taken as a necessary handicap. Beyond approval, and passing into the implementation stage, restrictions do exist for revisions or so called “virements” in the sense that they require approval by the MOFP. In this context, the survey on budget institutions reviewed before assign a high grade to Jamaica on the flexibility to change budget approval and the executive ability to cut spending unilaterally after passage of the budget.

The monitoring of the budget process is overseen by the MOFP. The Budget Division (which has participated from the beginning in the formulation stage) interacts with ministries and departments overseeing budgets. Cash management and investment programs are thoroughly monitored. In this post-approval process, the release of funds, through the so-called warrant system, constitutes a key element of centralized control of the budgetary process. We have seen, from section 117 of the Constitution, that no expenditure can be made without a warrant issued by the MOFP. This has two major consequences for the budgetary process. First, it contributes to the management of the Consolidated Fund guaranteeing a correspondence between flows of revenues and expenditures. Second, the issue of a warrant is a process in itself that takes several steps and assures a financial management in accordance with the FAA such that reinforces the control of expenditures. The post approval process is completed with the General Auditor and the Public Accounts Committee of Parliament.

### 1.2.3 Evaluations of the budgetary process

The budget process in Jamaica has been evaluated relatively recently by the World Bank (2001), through a Country Financial Accountability Assessment (CFAA), and by the consulting firm KPMG. Both focus on formal and actual processes and procedures, rather than on fiscal policy aspects of the budget institutions, and point to the existence of a well-grounded budgetary process that nevertheless deserves some adjustments. The CFAA recommends considering a move towards greater centralization in cash management by the MOFP, receiving a negative response from the Government of Jamaica (GOJ) based on the undesirability of (over) centralization of cash management when efforts of decentralization and improved efficiency and accountability are being

pursued by the GOJ. The KPMG report contains some other strategic aspects that go beyond formal budgetary procedures.<sup>9</sup>

The World Bank (2001) CFAA reported several observations from their evaluation concerning the gap between formal procedures and actual or informal practices. They included mainly issues of cash management (unused funds, lack of transparency and over-reliance on manual procedures), on the effect of a tight warrant system on cash management and on ministries' and agencies' flow of expenditures (effects on capital expenditures and on the uncertainty of cash flow streams) and on the separation or lack of direct correspondence between corporate plans (given by public entities) and the budget process in terms of information and monitoring. Recommendations to the GOJ were all in the area of cash management as well. First and foremost, a tighter and more centralized cash management through the placing of all accounts (in one or more banks) under the direct control of the Treasury.<sup>10</sup> In a second place, the regulation and enforcement of cash balance maintenance, the implementation of information technology modules or systems and more transparency (explanations) for cash management decisions and cash allocations by the MOFP.

The findings and recommendations of the KPMG (1999) report differ in that they also include some strategic aspects. In the findings, and beyond formal budgetary procedures, the report states that there is a significant amount of recurrent expenditure classified as capital expenditure that distorts the reality of expenditure patterns and undermines macroeconomic planning and capital expenditure programming. In the recommendations, the report calls for the creation of public expenditure units- for oversight responsibilities of the budget process- and of policy and coordination units. This is, seemingly, a reorganization of existing divisions and therefore it is not clear what are the advantages of the proposed move. Other recommendations are to increase focus on prioritization including targets and performance indicators, to reformulate the format of the budget, to change in the timing of the budget call and deadline for submissions, to revise the legal and regulatory framework apparently across the board and to review the definitions for recurrent and capital expenditures.

#### 1.2.4 Summing up

Our review of existing legislation on fiscal institutions in Jamaica corroborates the presence of the sound institutional framework that has been captured by previous comparative studies on budget institutions in Latin America and the Caribbean. Constitutional provisions work effectively in creating an environment for fiscal control by making debt service mandatory as the first charge on resources and by giving a centralized role to the MOFP. Details of the budgetary process learned from recent

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<sup>9</sup> References to the KPMG report are made using the World Bank (2001) report, since we could not obtain a copy of the report, neither do we know the opinion or response of the GOJ to its contents.

<sup>10</sup> This implies closing all accounts of spending agencies and redirecting all expenditures transaction flows through the Accountant General's Office (AGO) or sub offices, with the spending agencies issuing previously authorized expenditures transactions to the AGO and this sending the payment order to the nearest bank for direct payment.



evaluations go in the same line. Even though there have been interesting findings and useful recommendations that have stressed the role of cash management and some strategic aspects of the design of the budget process, these seem relatively marginal improvements and do not involve major designs that can be judged to have an impact on fiscal outcomes since they do not necessarily involve major improvements upon existing institutions that tackle the fundamental problems of incentives for the control of expenditures and deficits (or primary surplus generation) within an efficient running of public sector activities.

There are nevertheless some other aspects that deserve mentioning at this stage. They come under two major headings that are, first, improving accountability and transparency and, second, exploring ways of improving existing institutional arrangements in some new dimensions to cope with sudden or unexpected u-turns in performance.

First, and from a point of view of accountability and transparency, in the sense given by comparative fiscal institutional studies, the main apparent weakness of the budgetary process in Jamaica is that the public sector enterprises and other fiscal operations that fall outside Central Government do not allow an easy consolidation of public accounts to assess fiscal performance. Given that public entities are not integrated in the budget process in the same way as ministries and agencies and that the information on non Central Government accounts is not obtained from the Budget Memorandum, there is a case for extending the hard-budget-constrain institutional setting to the rest of the public sector. This needs to be assessed through a careful design analysis, encompassing regulatory reform on public services that does not conflict with efficiency objectives of decentralization and arms length relationships.

Further steps in the same direction have to do with efforts to make budget executions to be consistent with approved budgets and with improvements in formal budgetary procedures that have been stressed by other recent evaluations by multilateral agencies.

Second, the evaluation of fiscal institutions and fiscal outcomes in Jamaica shows an obvious stress between strong fiscal institutions and rocketing deficits and debt accumulation that come from hidden liabilities outside formal budget allocations and take the form of fiscal liabilities surprises. The relevant appraisal of the case of Jamaica has therefore to take into account this experience, because there is a twofold objective of fiscal consolidation and of avoiding future fiscal surprises. There are three complementary avenues of institutional improvement that follows from this view.

**First**, the design of additional explicit fiscal rules- upon the existing configuration of fiscal institutions- that act as constraints that insulate or insure fiscal outcomes from fiscal surprises. While the case for explicit rules may not be clear for fiscal consolidation if existing institutions generate good results, the point is rather if the introduction of explicit rules make fiscal results more sustainable and act as an insurance against adverse shocks. Fiscal responsibility laws that set the path of fiscal deficits and public debt appear to be the main candidates for consideration.

**Second,** the design of contingency funds that prepare for the absorption of external shocks or the appearance of fiscal surprises through hidden liabilities. Since the problem of Jamaica is more related with relatively sudden fiscal liabilities surprises rather than with cyclical stabilization, the types of funds that can be related to fiscal rules are the type of contingency funds. These can be incorporated with proper adaptations into existing fiscal institutions since both the Constitution and the FAA recognize their existence and could accommodate a redesign.

**Third,** the introduction of accrual accounting in the budget process that takes into consideration potential liabilities. This has been recognized by the multilateral institutions<sup>11</sup> for transparency reasons and as a move toward a system of commitment-based accounting. From a fiscal policy perspective it allows a correct treatment of hidden liabilities and makes fiscal outcomes more predictable and therefore controllable.

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<sup>11</sup> A move toward accrual accounting was also part of the comments made by the World Bank (2001) CFAA report.



## ***2. The Tax System of Jamaica***

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### **2.1 Introduction**

In this chapter we analyze the design of the tax system of Jamaica both in terms of allocation issues and incidence. Tax revenues have increased from about 23% of the GDP in fiscal years 1996/97 and 1997/98 to about 25% of the GDP in the following three years and are expected to yield 26.5% in 2002/03. This increase in tax revenues has been accomplished because of higher excises and a better revenue performance in the taxation of income and profits. In a highly indebted economy growing tax revenues are an encouraging fact.

However, the design of the tax system can be improved substantially. In the case of the GCT (the Jamaican VAT) there are several tax rates and exemptions that cannot be explained for equity reasons. The same conclusion can be obtained from the several and generous investment incentives embedded in the Corporation Income Tax. This favorable tax treatment of capital income together with the existence of labor taxes are difficult to justify in an economy with a 15% unemployment rate.

Personal Income taxation is better designed, with a flat marginal tax rate and progressivity brought into by a uniform exempt level.

The chapter is organized as follows. In Section 2 we summarize the characteristics of taxation in emerging economies to serve as an introduction to the analysis of section 3, which shows some tax statistics of Jamaica and our analysis of the most important taxes. Each subsection includes some suggestions for the improvement of the tax system.

### **2.2 Taxation in Emerging Countries<sup>12</sup>**

Emerging economies' tax systems have several characteristics that make them different from those of developed countries. Usually total tax revenues expressed as a fraction of the GDP are lower, and the share of consumption taxes in total tax revenues is larger. Income taxes collect a lower fraction of the GDP than what is the norm in OECD countries.

There are several reasons to explain why this is the case which have some relevance for policy recommendations.

First, the size of government tends to increase with the GDP per capita and consequently emerging economies require lower revenues than developed countries. Moreover, the

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<sup>12</sup> This section is a summary of section 6 of Artana, D.; López Murphy, R. and Navajas, F. (2002).

inflationary tax usually was an important source of total revenues, and it is not registered in tax revenue statistics. Recent stabilization attempts have put some stress on the need to raise non-inflationary tax revenues.

Second, income distribution is usually worse than in developed economies, informality in the labor market is higher and tax administration is weaker. Therefore, the income tax base is lower: income taxes fall on a small fraction of the population,<sup>13</sup> many individuals pay hardly any tax at all (obviously they pay no income tax) and tax evasion is usually higher in taxes that fall on income (which have self declaration for many taxpayers) than in consumption taxes (which have some cross checks built into them as is the case with the Value Added Tax).

Finally, in many countries foreign savings are very important (either because remittances from their citizens abroad are high or because they benefited from high capital inflows to emerging economies during most of the 1990's). Therefore, the base of consumption taxes is relatively enlarged compared to countries that are net exporters of capital. In some extreme cases, consumption is close to 100% of the GDP.

### **2.3 The Tax System in Jamaica**

The Jamaica tax system is composed of: (i) a 15% VAT of the consumption type (i.e., investment is excluded from the tax base), (ii) an income tax of 33 1/3% on the return on capital and a flat income tax on individual income at a rate of 25% with a minimum exempt income level, (iii) excise taxes and import duties that are equivalent to consumption taxes, (iv) taxes on labor income, and (v) property taxes, stamp taxes and other levies that are not important sources of revenue.

Table 2 shows tax revenues and other sources of revenues of the Central Government that accounts for most of the public sector. Tax revenues are about 25% of the GDP. About 40% of the total is obtained from taxes on income and property, with individual's tax payments explaining about half of that (i.e. the personal income tax yields about 5% of the GDP).<sup>14</sup> This increases to 6% of the GDP if the Education tax, which falls on labor income, is added.<sup>15</sup>

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<sup>13</sup> Sometimes this is also explained by very high exempt levels in the personal income tax. Note that in the 1940's when the US had very high tax-exempt levels the IRS collected in personal income taxes about 2% of the GDP, a fraction that is similar to that observed in many emerging economies nowadays.

<sup>14</sup> PIT includes PAYE (withholding of income tax) and Other individuals in Table 2.

<sup>15</sup> In the IMF classification the Education Tax stands as a tax on production, because it is a contribution that employers must calculate on their wage bill. As the burden of this tax in an open economy like Jamaica surely falls on workers it would be better analyzed as a proportional tax on labor income.

Figures for the collection of the GCT (the VAT of Jamaica) distinguish the tax paid at Customs, from the tax paid domestically. However, as the tax paid at Customs can be deducted from the tax calculated on domestic sales and exports are tax-free it is better to add both figures together and analyze the GCT as a tax on consumption. In the last 5 years the revenues from the GCT have been reduced from figures close to 8% of the GDP to about 6.5%.

Special excises on cigarettes, alcoholic beverages and petroleum products have increased from less than 1% of the GDP to about 2.5%. Customs duties, which are, de facto, a tax on consumption account for approximately 2.5% of the GDP.

### 2.3.1 Personal and company's income tax (PIT and CIT)

The most important characteristics of the Jamaica income tax, as established by the 1954 Law as amended up to 2001, are the following:<sup>16</sup>

- a. Profits obtained by any business located in Jamaica are taxed at a rate of 33 1/3% for most activities;<sup>17</sup> while individual income is taxed at a flat rate of 25%, with a minimum tax exempt level one per capita GDP. The tax base both in the PIT and CIT includes worldwide income of Jamaica citizens and firms. However income derived by foreign firms whose capital originates in countries that have tax treaties with Jamaica pay the tax fixed in the tax treaty.
- b. Withholding is applicable to dividends, royalties, management fees and branch remittance at the 33 1/3% rate, and for interest there is a range from 15% to 33 1/3%. However, the 15% rate applies to interest paid to certain payers (e.g. banks, building societies and dealers in the capital markets) that are later taxed at the CIT rate. Therefore, interest income is taxed at the same rate as any other income. At the personal level the taxpayer has to integrate the dividends but gets a credit. So de facto dividends are taxed at the PIT rate. The implications of these rules are that there is no double taxation of dividends like it happens in the US tax code. There is no tax on capital gains.
- c. Firms are allowed to deduct all their payments for interest. This creates a tax bias in favor of debt financing that is not fully compensated at the individual level because there are exemptions on interest accrued from foreign currency deposits and from life insurance companies if the deposit is maintained for a minimum of three years. Other interest payments are subject to a withholding rate of 25%.

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<sup>16</sup> The description of the tax system is based on a summary prepared by the IMF and the government of Jamaica.

<sup>17</sup> Building societies are subject to a rate of 30% and life assurance companies to a reduced rate of 7.5%.

**Table 2. Jamaica: Central Government Revenue and Grants (% of GDP)**

Period (all Fiscal Years)	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Budget 2002/03
Total revenue & grants (1+2+3+4+5)	26.40	25.37	26.60	29.99	30.03	27.59	29.18
1. Tax Revenue	23.10	22.62	24.04	25.08	25.88	24.36	26.56
Income and Profits	9.06	8.90	9.28	9.70	10.54	9.55	10.86
Bauxite/alumina	0.02	0.07	0.15	0.01	0.13	0.19	n.a.
Other companies	2.59	2.56	2.04	2.30	2.14	1.61	n.a.
PAYE	4.98	5.03	5.39	4.70	4.91	5.09	n.a.
Other individuals	0.26	0.28	0.30	0.39	0.25	n.a.	n.a.
Tax on dividend	0.20	0.14	0.27	0.28	0.28	n.a.	n.a.
Tax on interest	1.00	0.82	1.12	2.03	2.83	2.28	n.a.
Property tax	0.17	0.00	0.00	0.00	0.00	0.00	n.a.
Production and Consumption	7.17	7.03	7.53	7.63	7.93	7.68	8.14
SCT	0.63	0.84	1.20	1.07	1.59	n.a.	n.a.
Motor Vehicle Licenses	0.17	0.09	0.27	0.24	0.22	n.a.	n.a.
Other Licenses	0.02	0.03	0.02	0.02	0.01	n.a.	n.a.
Betting, gaming and lottery	0.10	0.11	0.13	0.15	0.15	n.a.	n.a.
Education Tax	1.11	1.19	1.21	1.17	1.14	n.a.	n.a.
Contractors levy	0.09	0.09	0.08	0.07	0.08	n.a.	n.a.
GCT (domestic)	4.04	3.88	3.79	4.02	3.88	3.70	4.08
Local Stamp duty	0.99	0.80	0.84	0.89	0.86	n.a.	n.a.
International Trade	6.70	6.69	7.23	7.75	7.41	7.13	7.56
Custom Duty	2.50	2.55	2.55	2.44	2.53	n.a.	n.a.
Stamp duty	0.23	0.27	0.26	0.25	0.22	n.a.	n.a.
Travel tax	0.38	0.36	0.54	0.59	0.59	n.a.	n.a.
GCT (imports)	3.58	3.50	3.23	2.71	2.85	n.a.	n.a.
SCT (imports)	0.00	0.00	0.66	1.76	1.23	n.a.	n.a.
2. Bauxite Levy	1.17	1.10	1.00	0.86	0.82	0.61	0.65
3. Nontax revenue	1.39	1.18	1.11	1.74	2.31	1.33	1.47
4. Capital revenue	0.30	0.19	0.22	2.00	0.50	0.76	0.31
5. Grants	0.44	0.28	0.23	0.31	0.52	0.53	0.19
Memo item							
Total GCT	7.63	7.39	7.02	6.73	6.73	n.a.	n.a.
Total SCT	0.63	0.84	1.86	2.83	2.82	n.a.	n.a.
GDP Estimate for the Fiscal year	238962	261877	278591	302850	336387	371803	402058

Sources: IMF and MOF. GDP for 1996/97 is obtained from IMF (2001) and since then from UBS/Salomon (2002)

- d. There is no correction for inflation. Therefore, firms are allowed to deduct nominal interest paid and depreciate every year a fraction of the historical cost of capital. But there are tax incentives for several activities. For example, investments in the Free Trade Zone are exempt from the income tax indefinitely, while investments in hotels and in some agricultural activities may enjoy a tax holiday from 5 to 15 years. There are also special depreciation schemes. There is a partial expensing (named the Initial

Allowance) of 20% of the investment with normal depreciation for the remaining 80% of the historical cost of the asset.<sup>18</sup> There is also a more favorable Special Capital Allowance for purchases of machinery in Basic Industry (part of manufacturing and construction) that may be depreciated in two years. But the most important tax break is an investment tax credit that goes from 20% for Basic Industry to 40% for the Sugar Industry of the cost of the capital good which is named Investment Allowance. This is a huge benefit because all the historical cost of the asset can be depreciated normally.

This tax policy can be analyzed from the following angles:

*Distortions in the allocation of capital*

The taxation on income in the Jamaica Tax Code has several flaws. For example, it creates differences in the marginal productivity of capital among economic activities, and it favors debt-financed investments in relation to equity-financed investments because in the first case the opportunity cost of capital is allowed to be fully deducted. As individuals are not fully taxed on the interest accrued on their savings it follows that debt-financed investments are taxed at a lower rate than equity-financed investments.

When there is inflation the Law establishes that firms may deduct the nominal interest paid on their debt, but can only deduct the nominal depreciation on their assets. It can be proved, following Atkinson and Stiglitz,<sup>19</sup> that firms get a tax break when there is inflation. Assume that for one peso of marginal investment in a no tax world the firm will invest if the value of the marginal productivity of capital is equal to the real opportunity cost of capital and the real value of depreciation.<sup>20</sup> That is,

$$(1) \text{PFk} = (i-M) + d(1+M)$$

where PFk = Value of the marginal product of capital

i = Nominal interest rate

M = Inflation rate

d = Economic depreciation rate

An income tax usually taxes the value of the marginal productivity of capital but allows for some expenditures. Defining,

t = Income tax rate

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<sup>18</sup> Expensing allows firms to deduct automatically a fraction or the total amount invested. When there is 100% expensing the CIT becomes a tax on consumption because capital income is deducted from the tax base like labor income and like any other expense of the firm. Anything that can be deducted up front is not taxed at the firm level.

<sup>19</sup> Atkinson, A. and Stiglitz, J. (1980).

<sup>20</sup> This assumes that the depreciation pattern is exponential.



I = The interest rate deduction allowed by the Tax Code

D = The depreciation allowed to be deducted in the Tax Code

it follows that the investment decision at the margin will be

$$(2) \text{PFk} = (i-M) + d(1+M) + \{t/(1-t)\} \{i-M-I+d(1+M)-D\}$$

The Jamaica Tax Code for debt-financed projects allows the nominal deduction of interest and depreciation for income tax purposes. Equation (2) then becomes:

$$(3) \text{PFk} = (i-M) + d(1+M) + \{t/(1-t)\} \{M(D-1)\}$$

As  $M(D-1)$  is negative because  $0 < D < 1$  it follows that debt financed investment is **subsidized** by the Jamaica Tax Code when inflation is positive.

For investments financed with equity equation (3) becomes:

$$(4) \text{PFk} = (i-M)/(1-t) + d(1+M) + tDM/(1-t)$$

It follows that equity-financed investment are taxed more heavily than in a no-inflation world because depreciation is only allowed to be deducted from the tax base based on the historical value of the asset. Therefore, when inflation is positive the bias in favor of debt financing is augmented.<sup>21</sup>

Neutrality is achieved if real interest rates and depreciation are allowed to be deducted, and at the same time interest on savings are taxed at the individual level, while dividends are exempt in the individual tax form.

But the Jamaica Tax Code allows for more subsidies on the cost of capital. There are exempt activities that pay no income tax at all and there is an investment tax credit (ITC) of 20% and 40% for some sectors. The ITC is a very generous tax break that reduces the purchasing cost of the asset to 60% or 80% of the cost faced by other firms, but allows firms to depreciate 100% of the value of the asset. The ITC is highly inefficient because it makes profitable from a private sector point of view projects that may have negative social rates of return and has a bias in favor of short-lived assets (because the benefit can be maximized if the firm repeats the investment).<sup>22</sup> The ITC granted by the Jamaica Tax Law requires the following changes in the expressions above:

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<sup>21</sup> In a zero inflation world the cost of capital of a debt financed project becomes  $(i-M) + d(1+M)$  and for equity financed projects it becomes  $(i-M)/(1-t) + d(1+M)$ . That is, if the opportunity cost of capital is 10% in real terms and the tax rate is 33 1/3% an equity financed project needs to have an internal rate of return of 15% real to pay the tax and yield to the investor the opportunity cost (both projects have also to generate enough revenues to offset the economic decline in the value of the asset). This bias at the firm level can be undone at the individual level if there is no taxation of the dividends and families pay the income tax on the interest they receive from their savings. The US Tax Code, for example, maintains the bias because dividends distributed by firms are taxed again at the individual level.

<sup>22</sup> For more details see A. C. Harberger (1980).

$$(5) \text{ Pfk} = (i-M) + d(1+M) + \{t/(1-t)\} \{M(D-1)\} - \{a(i-M+d(1+M)+ti)\} / (1-t)$$

for debt financed projects, where “a” is the ITC, and

$$(6) \text{ Pfk} = (i-M)/(1-t) + d(1+M) + tDM/(1-t) - \{a(i-M+d(1+M))\} / (1-t)$$

for equity financed projects. It is evident from expressions (5) and (6) that the last term is negative and its size may be high enough for the private rate of return required for the project to be negative.

Table 3 summarizes the Before Tax (and net of depreciation) Real Rates of Return for Equity and Debt Financed Projects.<sup>23</sup> It can be seen that in a country with a “typical” Tax Code when there is no inflation and if the opportunity cost of capital is 10% a project financed with debt will require a 10% internal rate of return if there are no tax breaks, while if it is financed with equity investors will demand a return of 15% so as to get, net of taxes, the opportunity cost for their funds. Therefore, there is a bias in favor of debt-financed projects. When inflation is positive the bias in favor of debt financing grows as shown in the second column. For example, an annual inflation rate of 5% will increase the before tax rate of return (IRR) for equity financed projects to 15.2%, while it would reduce the IRR for debt financed investments to 7.8%. The third column shows that indexation will restore the initial unbalance. The Tax Code in Jamaica tries to offset the penalty that inflation impinges on equity financed projects by allowing a partial expensing of investment through the Initial Capital Allowance of 20% (see column 4) but as this allowance is also available for debt financed projects the IRR for them is reduced to low values (6.7% if inflation is 5% and only 4.2% if inflation is 10%).

New machinery bought after 1994 in some sectors gets a higher break (see column 5, Table 3). The IRR for equity financed investment is reduced to about 10% while debt financed investment requires IRR as low as 1.4%. The last two columns of Table 3 show that the ITC allows projects with negative social IRR to be profitable for the private sector. For example, for debt financed projects in the sugar industry if inflation is 10%, an investment with a negative social rate of return of 17% per annum may yield for the investors a 10% positive return simply because the government is a silent partner that takes care of 40% of the investment cost and gets no share of the profits.<sup>24</sup>

The allocation of capital that these rules imply is highly inefficient. In no subsidized sectors capital financed with equity will have a productivity high enough to yield IRRs in the range of 14%, while in other sectors, its productivity could be as low as to get negative IRRs.

Tax incentives to investment are usually unfair because the owners of the promoted firms who belong to the highest income quintiles can enjoy them. Moreover, they create a fiscal

<sup>23</sup> In all cases the rates of return are expressed net of the depreciation allowance.

<sup>24</sup> The -17% IRR is calculated on a value of investment of 100, while the 10% comes from the same cash-flow but counting an initial cost of 60, given that the investor gets a tax offset of 40.

loss that either puts pressure on the deficit or requires higher taxes elsewhere. So the question is what are the benefits that they bring to a society? Advocates of tax incentives usually point to the increase in employment and rate of growth. However, the empirical evidence does not support this conclusion. Studies about US states with different policies towards incentives to investment and also some studies about the regional tax breaks granted in the European Community suggest that it is not true that economic growth or employment creation are higher because of the tax breaks. In fact, the evidence points to the opposite conclusion. There are several reasons for this:

- a. Tax incentives are usually biased in favor of capital-intensive activities or encourage the adoption of a higher capital/labor ratio. This is a consequence of the reduction in the cost of capital vis a vis the cost of labor.
- b. Tax incentives encourage an inefficient allocation of capital and this has a negative impact on the allocation of resources and in the short-term growth rate of the economy.
- c. The fiscal burden of tax incentives is financed by higher taxes on other activities that may be more efficient.

Some recommendations follow from this analysis: i) the government of Jamaica should attempt to gather information about the fiscal cost of tax incentives to get a precise estimate on the fiscal burden and include this information regularly in the annual Budget; ii) the government of Jamaica could find interesting to make a social benefit/cost analysis of the tax incentives with the purpose of checking the effective IRR for some projects; iii) it would be advisable to study the possibility of allowing the deduction of depreciation charges based on the indexed cost of capital and the deduction of only the real interest rate paid on business debt; iv) the investment tax credit should be abolished because it is highly inefficient and costly; v) if some kind of tax incentive to investment is maintained it would be better to have a partial expensing (like the Initial Investment Allowance) noting that if deductions of interest and depreciation are calculated in real terms an expensing of 20% reduces in that proportion the IRRs shown in the third column of Table 3; vi) the bias towards debt financing can be eliminated if all interest accrued to families are subject to the income tax or if they are fully exempt and the government does not allow the deduction of interest from the firms' tax base.<sup>25</sup>

#### *Other issues in the Income Tax*

*Inventory valuation.* According to a description of the recent changes made to Jamaica's Tax System by a consultant to the IDB the income tax permits the FIFO method (First In First Out) for the valuation of inventories.

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<sup>25</sup> Although this alternative has been discussed by the US Treasury in the early 1990's it will surely face strong opposition from private firms. Given that the Tax Code has a withholding of 33 1/3% on interest payments the Jamaica tax system is less exposed to back to back loans that artificially reduce the tax base. Hence, full taxation of interest at the individual level looks a better alternative.

In inflationary contexts the FIFO method to estimate the cost of the goods sold by a company leads to a taxation of nominal profits because the accepted cost for tax purposes is lower than the replacement cost of the inputs used to obtain the final product. Other methods to value inventories approximate in a better way the cost of goods sold. LIFO (Last in First Out) also implies some taxation of nominal profits but much lower than under FIFO, and the Cost of replacement method assures the taxation of real profits, but it is not generally accepted by the Tax Agencies of countries with low inflation.<sup>26</sup>

The government of Jamaica should evaluate the possibility of giving firms the option to use LIFO or FIFO, but restrict the change of method to a minimum number of years.

**Table 3. Before Tax Real Rate of Return for Equity and Debt Financed Projects (Annual Rates in %)**

		Typical Tax Code with no tax breaks for investment and no indexation	Typical tax code with no tax breaks for investment and indexation	Jamaica: General Tax Code		Jamaica: Exempt activities  Hotels and Free Trade Areas	Jamaica : Tax Credit 20%  Building and some machinery in some manufacturing and construction	Jamaica : Tax Credit 40%  Buildings and some machinery in agricultural & chips
				Initial investment allowance 20%	Depreciation in two years for new machineries			
Debt Financing	Inflation Rate							
	0%	10.0%	10.0%	9.1%	5.8%	10.0%	3.0%	-4.0%
	5%	7.8%	10.0%	6.7%	3.6%	10.0%	-1.4%	-10.5%
	10%	5.5%	10.0%	4.2%	1.4%	10.0%	-5.8%	-17.1%
Equity Financing	Inflation Rate							
	0%	15.0%	15.0%	14.0%	10.2%	10.0%	9.0%	1.0%
	5%	15.2%	15.0%	14.2%	10.3%	10.0%	7.6%	-3.0%
	10%	15.5%	15.0%	14.4%	10.5%	10.0%	4.2%	-7.1%

Assumptions: 1. The opportunity cost of capital in real terms is 10%.  
2. The economic depreciation of the asset is 10% per annum.

*Transfer pricing.* There are no special rules for transfer pricing in Jamaica. Most developing countries have recently adopted transfer-pricing rules to reduce the risk of suffering an artificial reduction in the tax base. Although it is reasonable to have some rules about transfer pricing (and there are well known models to adopt) it requires a training program for some officials of the tax agency so as to help them to focus the auditing process in those sectors or transactions where transfer pricing may be an issue.

In the case of financial transactions some OECD countries put restrictions on the interest payments that are allowed to be deducted from loans obtained abroad. Some European

<sup>26</sup> It is interesting to point out that firms, when giving the choice of method, many times opt for FIFO. One justification for that is that the book value looks higher (although this assumes some kind of veil of ignorance from the shareholders); a better explanation is that LIFO is clearly better when firms hold inventories higher than normal.

countries and the US only authorize the deduction of interest from the tax base if any loan is not higher than 150% of the equity of the firm (these are called “thin-capitalization” rules). In some Latin American countries like Argentina or Mexico governments introduced a minimum income tax equal to 1 to 2% of the value of the asset of the firm. In some developed countries minimum income taxes attempt to ensure minimum revenue for the government.<sup>27</sup>

Taxes on assets have been highly controversial because firms have to pay taxes even in years where they lose money. This is not a solid argument because a project has to be evaluated in several years and if the income tax and the tax on assets are integrated (one is a prepayment of the other) a good system of carry forward of losses takes care of most of the problem. But when capital markets are not well developed and firms face difficulties to finance their losses the pressure to eliminate the tax on assets would likely find the support of politicians.

An alternative is to introduce thin-capitalization and transfer pricing rules, facing their higher administrative costs.

*Taxation of capital gains.* Capital gains are not taxed in Jamaica, except in cases where the assets are sold before they are fully depreciated. Many countries opt for a lower tax rate on capital gains or even to exempt them from taxation. There are several trade offs:

- a. Different tax rates between normal profits and capital gains eases tax arbitrage movements that reduce revenues. This is an argument to apply the same statutory rate to all gains. However, capital gains for the purchase of shares have been usually taxed indirectly with the CIT at the firm level.
- b. If there is a decision to tax capital gains only real capital gains should be taxed. But this creates a bias against high-risk investments because for auditing reasons capital losses generally are not allowed to be deducted against ordinary income or former capital gains. Moreover, as it is very difficult to tax capital gains on accrual basis (at least from many assets) taxation of capital gains creates a bias to defer the selling of the asset because a lower tax in present value terms will be paid under realization of the gain.

*Tax rate structure.* Unlike most countries, Jamaica has a progressive PIT but with a flat marginal tax rate of 25%. The average tax rate for any taxpayer clearly increases with income because of the minimum exempt level that is approximately equal to one per capita GDP.

This system is good defined. It is simpler than those systems with progressive tax rates and the minimum exempt level is higher than those observed in developed countries (e.g. about

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<sup>27</sup> In the US the Alternative Minimum Tax forces firms and individuals to pay a lower tax rate on a restricted tax base so as to limit the tax break that any taxpayer can get. Switzerland and Canada are other examples of minimum taxes based on the value of assets or equity. The US administration has recently proposed to abolish the Alternative Tax.

50% of per capita GDP in the US) but this is reasonable for a developing economy like Jamaica. In fact, most countries in Latin America have minimum exempt levels that are a higher fraction of their per capita GDP.

Deductions from the tax base are restricted and have a ceiling as a fraction of the taxable income, which helps to reduce the administrative burden of dealing with these decisions to foster determined expenses of the taxpayer (like charity expenses).

Savings in pension funds is free of taxes up to a limit, which is a common feature in many countries and has a rationale in developing countries that usually have to increase their domestic savings.

There is a difference in the CIT rate (33 1/3% for most activities) and the marginal PIT rate (25%). The potential excess taxation of dividends is solved at the individual level because the taxpayer gets a credit for the full amount of taxes that the company “paid for him”; but there is a financial cost because, unlike other sources of revenue, dividends are pre-taxed at a higher rate than the marginal rate of the individual. This is a minor issue, and in any case has no easy solution.

### 2.3.2 Labor taxes

Labor income has to pay also Social Security Contributions and some payroll taxes that are earmarked for some special purposes.

In the case of social security contributions it is necessary to evaluate if they are true taxes. If workers are receiving benefits that at the margin compensate them for the additional taxes paid, social security contributions will better be analyzed as forced insurance programs or savings. For payroll taxes the benefits have no clear relationship to the taxes paid by each employee or his employer and are better understood as taxes on labor income. Table 4 summarizes the rates on labor income.

**Table 4. Social Security contributions and payroll taxes in Jamaica**

	Social Security	Housing Fund	Training Fund	Education Tax
<b>Employee</b>	2.5% up to J\$ 20833/mo	2%. Reimbursable with 7% interest		2%
<b>Employer</b>	2.5%	3%. Reimbursable with 7% interest	3%	3%
<b>Self Employed</b>	5%	3%. Reimbursable with 7% interest		2%
<b>Others</b>	J\$ 10 per week			40 cents a week

Note: Others are domestic workers in the Education Tax and domestic workers and defense workers for Social Security

It is beyond the scope of this paper to make an in-depth analysis of the social security system but the tax rates look relatively small. To the extent that benefits are related to the wages earned and the number of years of contribution these contributions are better

analyzed as a forced savings and not as a tax. If the pay as you go system is reformed into a fully-funded scheme this will also be so.

In the case of the payroll taxes there is no clear relationship between the amounts paid by the employee (or his employer).<sup>28</sup> The contributions to the National Housing Trust are reimbursable after 8 years for the employee (or fully when he retires) and after 26 years for the employer. But as the interest rate is lower than the market rate there is an implicit tax. If the market rate is 15% per year the taxes (measured in present value) are 0.8% for the employee and 2.5% for the employer, while at 20% interest they raise to 1% and to 2.85% respectively.

The HEART tax that finances a training program to develop employment opportunities for trainees is clearly a tax because the probability of receiving a benefit have no connection with the amounts paid by each worker. The same happens with the Education tax.

Therefore, excluding Social Security Contributions there is a tax wedge of 12%, which is not high compared with other countries. However, taxing labor in a country where unemployment is so high is a bad decision. On the one hand, because it affects negatively more labor intensive activities which will face a higher impact on the price to the consumer because of the higher share of labor in the total cost of production. On the other hand, because it encourages firms in all activities to use technologies that save in labor. This bias is reinforced by the tax incentives on investment analyzed above. It is a paradox that in a high unemployment environment the Tax Code penalizes the use of labor by introducing some special taxes and, at the same time, subsidizes the use of capital through generous tax breaks.

Taxes on labor are also a bad policy when informality is pervasive in the labor market. The productivity of labor in formal activities will need to be at least 12% higher than in informal competing activities to offset the difference in the cost of labor that evasion will create. The allocation of labor to more efficient activities would be encouraged if government revenues were obtained from consumption taxes that tend to fall in a more balanced way between formal and informal workers.<sup>29</sup>

### 2.3.3 Taxes on consumption

#### *The General Consumption Tax (GCT)*

The GCT is a value added tax on goods and services at a general rate of 15%. It is generally acknowledged that a VAT at a uniform rate is the best way to tax consumption. In theory, a more efficient indirect taxation can be obtained by following the so-called “Ramsey

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<sup>28</sup> In small open economies like Jamaica the burden of labor taxation likely falls on workers because capital mobility makes impossible to shift the burden to capital owners and tradeable sectors have no room to transfer part or all their higher costs to buyers in the rest of the world.

<sup>29</sup> If the effect on wealth owners is left aside a tax on wage income is equivalent to a consumption tax.

Rule”, but this rule has severe practical problems.<sup>30</sup>

The GCT has several flaws that make it very different from a well structured VAT. The most important are the following:

- a. The tax rate is not uniform. The general rate is 15%, but it is reduced to 12.5% for some construction inputs (cement, concrete, cement blocks, steel bars and some steel wire). The zero tax rate that is the right solution for exports to allow the recovery of the tax paid in the previous stages of production, is extended to several foodstuffs, health products, printed matter, some agricultural equipment, international freight and some miscellaneous items (some sport equipment, energy savings devices) and to inputs exempt from customs duties of those goods produced under special tax regimes (hotels, bauxite, industrial incentive act, free trade zone, petroleum act, motion picture, factory construction, etc).<sup>31</sup> Moreover, there are more exempt activities<sup>32</sup> than it usual in other countries. Besides education, financial and insurance services, cultural activities and transport, there are exemptions for several food items, coffins made of wood, ice, some construction items, some body care items (e.g. toilet paper, bleach), and some medical services. Clearly, relative prices faced by the consumer are affected by the special treatment granted by the Tax Code. Finally, vehicles are taxed with rates that vary from 0% to 177%. Consumers of some goods and services face a price equal to 1.15 of the net of tax price, for some construction items is 1.125, for zero rated goods is 1 and for exempt activities is between 1 and 1.15 depending of the share in cost of the taxed inputs of the exempt product,<sup>33</sup> while users of vehicles face a wide range of relative prices depending on several factors like the power of the engine or the seat capacity of buses.

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<sup>30</sup> The use of the optimum indirect taxation rules may justify higher taxes on some goods (e.g. those with inelastic demands). We are not advocates of this rule as a means to design consumption taxes for practical and theoretical reasons: (i) it requires a lot of information about direct and cross elasticities of demand that is hardly available in emerging economies; (ii) it encourages lobbying activities to prove that one good deserves a lower taxation because of efficiency reasons (this is an argument similar to that used to advocate for uniform import tariffs which do not ensure equal effective protection for all activities, but are an effective instrument to deter lobbying activities); (iii) it usually concludes that goods with inelastic demand should be taxed more heavily and these goods are usually those that are a larger fraction of the expenditures of poor families; (iv) a tax system with multiple rates is more difficult to administer; (v) evasion usually increases with higher tax rates; and (vi) they assume that the government will act as a monopolist that is able to discriminate. Remember that the optimum indirect tax rule is a response to the inability to use lump sum taxes for its negative distributional impact and the lack on information to extract consumer surpluses in a non-distortive way. For more details see Alm (1996) and Harberger (1994).

<sup>31</sup> To the extent that the zero tax rate is restricted to the inputs of these sectors there is only a financial gain for the firm because it is avoids the payment to the GCT at Customs, but the tax is finally collected when it has to pay its tax duty because there is no fiscal credit to deduct from the fiscal debit originated in its sales.

<sup>32</sup> Exempt activities pay no tax, but suffer as a cost the GCT charged by their suppliers.

<sup>33</sup> There are some goods where the special treatment may be justified for efficiency reasons (like education which is an investment in human capital and not a consumption good) or for equity reasons (some foods of special importance in the consumption basket of poor families, although there are better instruments to deal with this problem). Clearly, the number of special cases in the GCT of Jamaica far exceeds these “normal” special cases.



- b. The wide difference in rates, even for products that may be close substitutes tends to create a more inefficient allocation of resources and a huge administrative cost of control, given that the tax agency has to check that goods by the same firm that are taxed at 15% may not be disguised for tax purposes from goods taxed at lower rates.
- c. Tax breaks vary in several dimensions. One is across consumption goods as mentioned above, but there are different tax treatments inside particular activities (e.g. not all health and food products are taxed at zero rates, some fruits and vegetables are exempt while others are taxed; probably some extreme examples are exemptions granted to “baking flour packaged in quantities of no less than 45.359 kilograms” or crackers that have a very precise definition to qualify for the exemption); and there are different tax treatments according to who is the final user (e.g. government agencies face zero GCT rates, motor vehicles used by Parliament members, school principals, medical practitioners, nurses, public health officers, traveling officers are taxed at zero rates). Another particular case is the taxation of vehicles, which increases the protection for some users<sup>34</sup> (e.g. Range Rover, Jeep, Pathfinder or Trooper for use in agriculture have a 20.51% rate while other trucks face higher rates). The negative consequences of these rules are several: there are goods which are benefited from higher protection from imports or from differential treatment to their close substitutes and there is an open invitation to fraud by granting exemptions to some individuals that can resell the goods that they bought at a lower price.
- d. Tax breaks to foodstuffs and health care items, even for those goods that are important in the consumption basket of the poorer families, create a fiscal loss because for most goods in the economy the largest share of total sales is bought by medium and high-income families.<sup>35</sup> It is better to have uniform taxes and compensate the poorer families with special programs (either in the form of cash subsidies, negative income taxes or workfare programs).
- e. Petroleum products are exempt from the GCT, and taxed under the Special Consumption Tax. Although their imported inputs are subject to zero rates there are other inputs that pay the GCT. This creates a cost for the refineries.
- f. This wide number of special tax treatments has surely a huge fiscal cost (although we have not obtained exact figures on this) that forces the government to raise other taxes to comply with its targets for revenues, and they also have negative consequences on the allocation of resources, because of the different tax rates. The government of Jamaica should try to revamp the GCT to convert it to a uniform tax VAT with only a few exemptions, and if there is political decision to subsidize some

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<sup>34</sup> The tax rate paid by a dealer is lower than the tax rate paid by final users. This gives a special protection to car dealers.

<sup>35</sup> Goods have a positive income elasticity and wide differences in family incomes explain that only a small fraction of sales is consumed by the poor.

sectors or the poor it is better to address these goals through public expenditure programs. This would also allow the GCT to increase its share in total tax revenues, and it would tax consumption in a more uniform way and also more heavily, and by doing so would favor domestic savings.

*The Special Consumption Tax (SCT)*

The SCT is applied to the manufacture or importation into Jamaica of alcoholic beverages, tobacco products and petroleum products. There are a few exemptions (like diesel oil used for generation of electricity and by the Jamaica Defence Force).

Special excises on cigarettes, fuels and alcoholic beverages are used in most countries. The justification for special taxes on the consumption of these goods is based on the following arguments:<sup>36</sup>

*Efficiency reasons.* The theory of optimal taxation concludes that goods with low price elasticity of demand should be taxed more heavily because departures from the efficient outcome are minimized (a lower elasticity means that for a given increase in prices the reduction in quantities is not very important). Moreover, to the extent that the consumption of these goods creates negative health externalities or they are good alternatives to finance public investments (e.g., taxes on fuels as a substitute for tolls), there is a second argument for extraordinary taxes.

However, the relevant price elasticities of demand appear to be higher than expected. What matters for public policy is the long run elasticity. For example, in the Argentine case we estimated that alcoholic beverages are price elastic and cigarettes have a long run price elasticity of 0.6. Moreover, when the change in the consumer price is caused by a change in taxes the quantity response is higher. The intuition for this is simple: higher taxes also encourage illegal activities (smuggling, round tripping) and as a consequence of this the reduction in legal sales is larger than what one observes when a higher net of tax price causes the increase in price. The long run elasticity of legal sales to the tax rate was 0.8, a third higher than the “traditional” price elasticity of demand.<sup>37</sup>

With regards to externalities there is no estimate for emerging markets. But the most reliable estimate for the US point out that the negative externality (e.g. the damage to third parties that smoking creates) may value about US\$ 0.30 per pack and there are estimates that point to about US\$ 0.20 per gallon of diesel in the case of the UK.<sup>38</sup>

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<sup>36</sup> This section is based on OEF-FIEL (1998).

<sup>37</sup> See Ahumada et al (2000).

<sup>38</sup> See Gravelle and Zimmerman (1994).

*Equity.* Cigarette taxes are usually regressive. In Argentina we found taxes on cigarettes were the most regressive of all.<sup>39</sup>

*Practical issues.* High taxes on cigarettes, fuels or alcoholic beverages encourage smuggling and round tripping. Evidence from Canada and the UK suggests that better control has not been effective in solving the problem. Only when tax rates were reduced the illegal activities ceased. However, in countries where tax evasion is rampant in all taxes it is not so clear that it pays to reduce excises if the revenues that the government loses have to be obtained by raising other tax rates.

A second problem that the government faces is to choose between specific or ad-valorem tax rates. The international evidence shows that almost all developed countries use specific excises on fuels and alcoholic beverages, with more variation in the case of cigarettes.

Ad-valorem taxes are better than specific in highly inflationary contexts and for equity considerations, to the extent that poorer individuals consume more intensively the low quality brands. But it has to be remembered that there are more efficient instruments to deal with equity objectives.

Ad-valorem taxes penalize improvements in the quality of the good taxed because every time the net of tax price increases the consumer price increases in a higher proportion (the “multiplier” effect), they also make tax revenues vulnerable to tax wars as they subsidize the use of marketing strategies based on the reduction of prices because the government becomes a silent “partner” in sharing part of the cost of the lower price. It follows that ad-valorem taxes favor price wars. Finally, specific taxes are better to deal with the problem of externalities because they can be better targeted to the input that creates the health hazard (e.g. a tax based on the content of nicotine).

The international experience appears to suggest that specific taxes on cigarettes encourage quality, and since high quality products can support relatively high tax rates, specific taxes can generate greater revenues for the government than ad valorem taxes. One example is the comparison between the UK and France.<sup>40</sup> Both countries are similar in terms of population, per capita GDP and consumption of cigarettes, but in the UK, where specific taxes are relatively more important, prices and government revenues are much higher than in France.

In sum, for theoretical and empirical reasons specific excises look better, but they may need to be adjusted periodically in inflationary contexts, and this usually creates political problems that may reduce the effective tax rate measured in real terms. However, general ad valorem taxes (VAT) should be maintained so as to tax the cigarette, fuels and beverages industries in the same way than other sectors are taxed. Specific excises are

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<sup>39</sup> See FIEL (1998).

<sup>40</sup> See OEF and FIEL (1998).

better than ad valorem, but the arguments are not valid for general indirect taxes. It is not possible to design a uniform lump sum VAT, and even if it were possible it would be very inefficient because it would distort relative prices in an ad-hoc way. In the case of additional indirect taxes (excises) as it was explained in the text, efficiency objectives are better achieved through specific taxes, because one of the government objectives is to increase the relative price of the good that creates negative externalities.

*Excises in Jamaica.* The SCT on petroleum products and on cigarettes has both a specific component and ad-valorem one. In the case of alcoholic beverages the tax is only ad valorem.

Overall taxation of gasoline is slightly higher than for automotive diesel oil, but Jamaica has avoided the wide disparity in the relative price of these two products that has been so pervasive in other emerging economies. The specific component is relatively small and the price to the consumer was in the first quarter of 2001 about US\$ 2.05 per gallon of premium gasoline and US\$ 1.85 per gallon of diesel oil. These prices were about 20% higher than the street price in the US but much lower than in Europe.

The ad valorem tax rate on spirits has three brackets calculated on the value of the product: 14.5% for an alcohol content below 31.5%, 16.1% from 31.5% to 57.1% and 24.3% above 57.1%. Beer below 6% of alcohol content faces a tax rate of 15.9% and other beer 10%, while wines face a tax rate of 14%. It follows that the rate structure is biased against beer and wine, which in other countries usually face much lower rates than beverages of high alcohol content. This is probably used as an indirect way of protecting some local production of spirits through the taxation of their substitutes.



### ***3. Fiscal Performance and Public Debt Sustainability***

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In this chapter we review the recent fiscal performance of Jamaica and we offer different estimates of the primary surplus required to achieve public debt sustainability under alternative assumptions about the demand for Jamaican assets both from multilaterals and holders of commercial debt issued at market rates, both in the domestic market and in international capital markets.

There are several reasons that suggest that emerging markets should follow a more cautious approach than developed countries with their fiscal policy. In developing countries the rate of growth tends to be more volatile because there are supply shocks that reduce- and sometimes in a dramatic way- the potential output of the economy. These shocks can be driven by a drastic drop in the terms of trade in goods or real services- in this last case for economies heavily dependant on tourism- or in the real rate of interest- for economies that rely on external savings.

What makes these shocks important is that the possibility of substitution between traded and non traded goods is not always as large as it should be, in part and in some cases due to the semi-open nature of some of these economies, where a high protection rate makes naturally tradable sectors become non-tradable or of low tradability outside the borders. The impact of a shock disseminates in a very different manner from what is the norm in very open economies. If exports have a large component of natural resources, or they are concentrated in a few sectors, or depend on regional (quasi-domestic) markets, the required (market clearing) change in relative prices is very large because the elasticity of the supply of exports is usually small.

Another discussion is about the level of public debt and fiscal deficit that an economy can sustain. The European countries have agreed in the Maastricht Treaty that the debt ceiling should be 60% of the GDP and the deficit cannot increase above 3% of the GDP. An aspect to be mentioned, incorporated in the European treaty and not common in laws of fiscal regulation and responsibility is the reference to the rate of interest on public bonds and to its spread with that of more stable countries (it has to be lower than 150 basic points measured in domestic currency). This concept, similar to the country risk premium concept for emerging economies, is very significant since it includes private information for the evaluation of public policy and it reveals the consistency or not of fiscal plans. Even more, the 'price' of public spending, which in the end is no more than a bundle of investment projects, is the same rate of interest of debt issues on which public sector activities are financed.

Moreover, when a country is running a current account deficit it would be advisable to achieve a fiscal surplus. The rule or recommendation to avoid the twin deficits in turn creates a worthy effect that additional capital inflows should be balanced automatically with a lower interest rate. In the case that these inflows continue, the debt management

should complete the arsenal of stabilizing measures by changing the composition towards domestic debt when the capital flows revert.

This discussion leads to an agenda that is based on different recommendations. First, current and capital expenditures should be based upon an institutional framework that establishes stringent debt targets and balance budgets according the projected potential growth trend adjusted by a correction reflecting external conditions coming from terms of trade and capital inflows. Second, in practice this will be affected by the degree of openness of the economy and the history and nature of fiscal institutions; more open economies with exports more based on elastic supplies are more apt to adjustment to facilitate macroeconomic corrections and this fact is a complement of the proposed counter-cyclical policy. Third, the importance and significance of these rules will be accentuated if the monetary (exchange rate) regime is very rigid in which case fiscal policy must follow a path consistent with the numeraire of the economy.

Jamaica is a relatively open economy but its export performance has been far from impressive.<sup>41</sup> Exports of goods are about 18% of the GDP, while imports are 37% of the GDP while Tourism (net) adds another 13%. About half of exports of goods are bauxite and alumina, and about half of trade is done with Nafta countries, while 80% of tourist arrivals come from Nafta countries. Therefore, there is a strong dependence either on the evolution of the US economy both for tourist arrivals and for the FOB price of exports and imports; or on the price of alumina (which is also dependent on the US economy because virtually all exports of this product go to a plant located in the US).<sup>42</sup>

Remittances from citizens living abroad have increased recently (from 20% of imports in 1997 to 27% in 2001) and by themselves they usually double in size the current account deficit. Remittances in other countries have not been subject to wide fluctuations, at least compared with portfolio flows.

In the last five years and in spite of the fiscal efforts of the government of Jamaica the country lived in almost all years under the twin deficits (fiscal and external). Fiscal deficits have traditionally been higher than capital expenditures. And the public debt, after the government absorbed the costs of the restructuring of the banking industry, has grown to 133% of the GDP.

### **3.1 Fiscal Performance in Jamaica**

Tables 5, 6 and 7 summarize public sector operations following IMF classification<sup>43</sup> with basic information provided by the MOFP. Data is expressed in current JM dollars, as a percentage of GDP and in current US dollars. The reason for observing series in US

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<sup>41</sup> Exports of goods has been declining in nominal USD almost every year since 1997.

<sup>42</sup> When analyzing the 1990's one should bear in mind that unlike other countries so closely related to the US economy, Jamaica could not "profit" from the high growth rate observed in the United States.

<sup>43</sup> See IMF (2001) Table 2.

dollars comes from the relevance for a small open economy of evaluating the level of public expenditures in terms of the currency of reference. Oscillations come from real exchange rate appreciations that in turn reflect expansion in non-traded expenditures where public sector primary expenditures play a major role. We also include information on nominal and real exchange rate (obtained from the BOJ), an index of export prices and a measure of public debt variation (obtained from debt statistics published in the 2002/03 Budget Memorandum). Several stylized facts are reflected in the data:

- a. Fiscal deficits in Jamaica soared in the second half of the 90s following the increase in public sector liabilities associated with the financial crisis. Progress toward equilibrium is made in recent years, in particular since 1999/2001 when Jamaica achieves double-digit figures of the public sector primary surplus as a percentage of GDP. The switch in the Central Government primary surplus between the peaks of the deficit in 1997/98 and 2000/01 is close to 7% of GDP and is explained by higher tax and non-tax revenues and lower primary expenditures.
- b. Tax revenues increased in recent years both as a percentage of GDP and significantly in US dollars. Revenues and grants move to around 30% of GDP. The increase represents less than 1% of GDP compared with the average values of the first half of the 90s, while in US dollars the increase is about 90%. A decrease in tax revenues was observed in 2001/02 after the shocks suffered by the economy in the second semester, and a recovery is projected under the current budget.
- c. Primary expenditures of the Central Government show an increase in all measures (JM dollars, US dollars and as % of GDP) when compared with the first half of the 90s. However, in recent years they have been falling in US dollars and as a percentage of GDP. In 2001/02 an increase is observed in the data. Figure 3.1 shows primary expenditures in current US dollars in the last decade and describes the large increase from 1994/95 to 1997/98 and the relatively smaller reduction since then. Figure 3.2 shows primary expenditures in US dollars but deflated by an index of export prices to take account of the numeraire of traded goods and the income potential of the country.
- d. However, this pattern is different for wages and salaries (that have been growing in US dollars) that for other recurrent expenditures (classified as programs) and in capital expenditures (that have been declining). Capital expenditures have been clearly adjusting downwards in recent years in US dollars and as a percentage of GDP reflecting the adjustment in primary expenditure since 1998/99 felt on this item. The increase in 2001/02 in primary expenditure in US dollars is due to wages and other recurrent expenditures (programs).
- e. Interest expenditures have been the most dynamic item of the budget in recent years reflecting the debt burden and corresponding debt service. Interest represented about a third of expenditures in the first half of the 90s and have grown up to more than 40% in the recent years. Interest expenditures were always above wages and salaries (except in 1997/98 where wage expenditures increased above interest); the gap is now around 18%, which is equivalent to that observed in the first half of the 90s.



- f. Finally debt statistics can provide a crude approximation of the implicit public sector balance measured “below the line”, even though the time allocation of the deficits-when debt is registered- is imperfect. This is shown in Table 8 where the resulting figures of debt variation in US dollars are compared with available figures of public sector balance showing some correspondence for the period 1996/97 –1999/00. At the same time the resolution of financial liabilities shows an increase in the debt variation that is registered in the last two years.

**Table 5. Jamaica: Summary of Public Sector Operations (in millions of Jamaican dollars)**

	Aver. 90-95	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02 prov.
<b>Central government balance</b>	3,041.9	-14,966.1	-19,962.3	-19,171.1	-12,575.3	-3,172.0	-21,203.3
<b>Revenues and grants</b>							
	30,844.6	63,085.6	66,425.8	74,096.2	90,828.3	101,021.1	102,588.2
Tax	27,655.6	57,988.9	62,096.6	69,757.0	78,567.2	89,827.0	92,820.5
Nontax	2,350.8	4,037.0	3,604.6	3,686.9	11,326.3	9,457.0	7,793.0
Grants	838.1	1,059.7	724.6	652.3	934.8	1,737.1	1,974.7
<b>Expenditures</b>	27,802.7	78,051.7	86,388.1	93,267.3	103,403.6	104,193.1	123,791.5
Wages and salaries	7,996.5	24,043.3	29,065.6	31,913.2	31,895.0	35,163.8	42,588.2
Interest	9,467.0	27,280.4	24,563.7	34,588.9	41,784.0	42,920.3	51,010.3
Other Expenditures (programmes)	5,652.6	12,901.5	18,483.9	18,240.8	19,487.3	17,696.6	20,066.5
Capital Expenditures	4,920.3	13,498.0	13,128.0	7,503.2	9,146.8	9,344.7	10,126.4
Statistical Discrepancy	-233.7	328.5	1,147.0	1,021.1	1,090.5	-932.2	-
<b>Rest of public sector balance</b>		2,251.0	-4,224.0	-11,194.0	-9,196.0		
Operating balance of public enterprises		679.0	2,134.0	3,494.0	3,283.0		
FIS/FINSAC balance		-700.0	-5,562.0	-14,590.0	-13,391.0		
Bank of Jamaica operating profit/loss		2,272.0	-797.0	-98.0	912.0		
<b>Total Public sector balance</b>		-10,946.0	-24,187.0	-30,365.0	-21,771.0		
External financing		-2,137.0	2,770.0	-2,227.0	-3,523.0		
Domestic financing		13,084.0	21,417.0	32,595.0	25,295.0		
Banking System		-2,866.0	48,626.0	23,455.0	8,590.0		
Others		15,950.0	-27,209.0	9,138.0	16,705.0		
<b>Central Government primary balance</b>		14,083.0	4,601.0	15,418.0	29,208.7	39,784.3	29,807.0
<b>Public sector primary balance</b>		16,365.0	3,229.0	19,384.0	32,491.0		
<b>Central Gov. Primary Expenditure (in Jamaica dollars)</b>	18,335.7	50,771.3	61,824.4	58,678.4	61,619.6	61,272.8	72,781.2

Source: Data from MOFP and IMF (2001)

**Table 6. Jamaica: Summary of Public Sector Operations (as percentage of GDP)**

	Aver. 90-95	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02 prov.
<b>Central government Balance</b>	3.1	(6.3)	(7.6)	(6.9)	(4.2)	(0.9)	(5.7)
<b>Revenues and grants</b>	29.3	26.4	25.4	26.6	30.0	30.0	27.6
Tax	25.9	24.3	23.7	25.0	25.9	26.7	25.0
Nontax	2.4	1.7	1.4	1.3	3.7	2.8	2.1
Grants	0.9	0.4	0.3	0.2	0.3	0.5	0.5
<b>Expenditures</b>	26.2	32.7	33.0	33.5	34.1	31.0	33.3
Wages and salaries	7.6	10.1	11.1	11.5	10.5	10.5	11.5
Interest	8.8	11.4	9.4	12.4	13.8	12.8	13.7
Other Expenditures (programmes)	5.4	5.4	7.1	6.5	6.4	5.3	5.4
Capital Expenditures	4.6	5.6	5.0	2.7	3.0	2.8	2.7
Statistical Discrepancy	(0.1)	0.1	0.4	0.4	0.4	(0.3)	-
<b>Rest of public sector balance</b>		0.9	(1.6)	(4.0)	(3.0)	-	-
Operating balance of public enterprises		0.3	0.8	1.3	1.1	-	-
FIS/FINSAC balance		(0.3)	(2.1)	(5.2)	(4.4)	-	-
Bank of Jamaica operating profit/loss		1.0	(0.3)	(0.0)	0.3	-	-
<b>Total Public sector balance</b>		(4.6)	(9.2)	(10.9)	(7.2)	-	-
External financing		(0.9)	1.1	(0.8)	(1.2)	-	-
Domestic financing		5.5	8.2	11.7	8.4	-	-
Banking System		(1.2)	18.6	8.4	2.8	-	-
Others		6.7	(10.4)	3.3	5.5	-	-
<b>Central Government primary balance</b>	11.9	5.9	1.8	5.5	9.6	11.8	8.0
<b>Public sector primary balance</b>		6.8	1.2	7.0	10.7		
<b>Central Government Primary Expenditure</b>	17.4	21.2	23.6	21.1	20.3	18.2	19.6

**Table 7. Jamaica : Summary of Public Sector Operations  
(in millions of US dollars)**

	Aver. 90-95	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
<b>Central government Balance</b>	124.9	-421.5	-558.5	-520.9	-313.6	-72.2	-456.2
<b>Revenues and grants</b>	1,229.4	1,776.6	1,858.5	2,013.2	2,265.3	2,297.9	2,207.3
Tax	1,092.4	1,633.1	1,737.4	1,895.3	1,959.5	2,043.3	1,997.1
Nontax	99.9	113.7	100.9	100.2	282.5	215.1	167.7
Grants	37.1	29.8	20.3	17.7	23.3	39.5	42.5
<b>Expenditures</b>	1,104.5	2,198.1	2,417.1	2,534.1	2,578.9	2,370.0	2,663.5
Wages and salaries	320.7	677.1	813.2	867.1	795.5	799.9	916.3
Interest	373.1	768.3	687.3	939.8	1,042.1	976.3	1,097.5
Other Expenditures (programmes)	225.1	363.3	517.2	495.6	486.0	402.5	431.7
Capital Expenditures	192.2	380.1	367.3	203.9	228.1	212.6	217.9
Statistical Discrepancy	-6.6	9.3	32.1	27.7	27.2	-21.2	-
<b>Rest of public sector balance</b>	-	63.4	-118.2	-304.1	-229.4	-	-
Operating balance of public enterprises	-	19.1	59.7	94.9	81.9	-	-
FIS/FINSAC balance	-	-19.7	-155.6	-396.4	-334.0	-	-
Bank of Jamaica operating profit/loss	-	64.0	-22.3	-2.7	22.7	-	-
<b>Total Public sector balance</b>	-	-308.3	-676.7	-825.0	-543.0	-	-
External financing	-	-60.2	77.5	-60.5	-87.9	-	-
Domestic financing	-	368.5	599.2	885.6	630.9	-	-
Banking System	-	-80.7	1,360.5	637.3	214.2	-	-
Others	-	449.2	-761.3	248.3	416.6	-	-
<b>Central government primary balance</b>	-	396.6	128.7	418.9	728.5	904.1	641.3
<b>Public sector primary balance</b>	-	460.9	90.3	526.7	810.3	-	-
<b>Central Gov. Primary Expenditure (in millions of US dollars)</b>	731.4	1,429.8	1,729.8	1,594.3	1,536.8	1,393.8	1,565.9
<b>Central Gov. Primary Expenditure in millions of US dollars (Export Price Index)</b>	672.1	1,068.7	1,335.0	1,331.5	1,395.4	1,221.0	
<b>Exchange Rate. National Currency per US Dollar</b>	24.1	35.5	35.7	36.8	40.1	44.0	46.5
<b>Real Exchange Rate. Base 1995 = 100</b>	109.3	80.1	73.0	68.0	71.6	77.1	74.7
<b>Export Prices Index Number. Base 1990=100</b>	109.5	133.8	129.6	119.7	110.1	114.1	

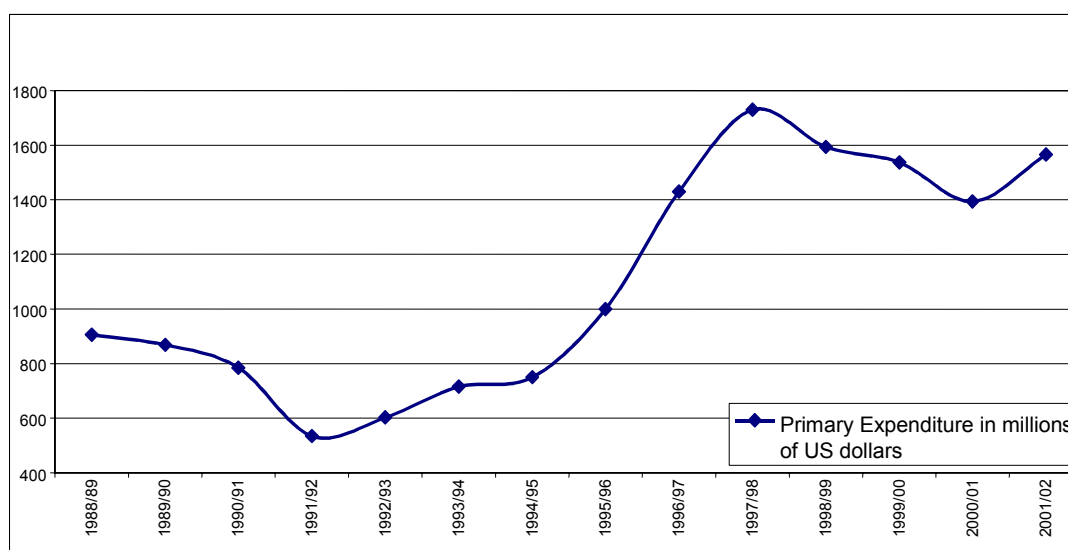
Source: Table 1 and BOJ for exchange rate data.

**Table 8. Jamaica: Debt Variation and Public Sector Balance**

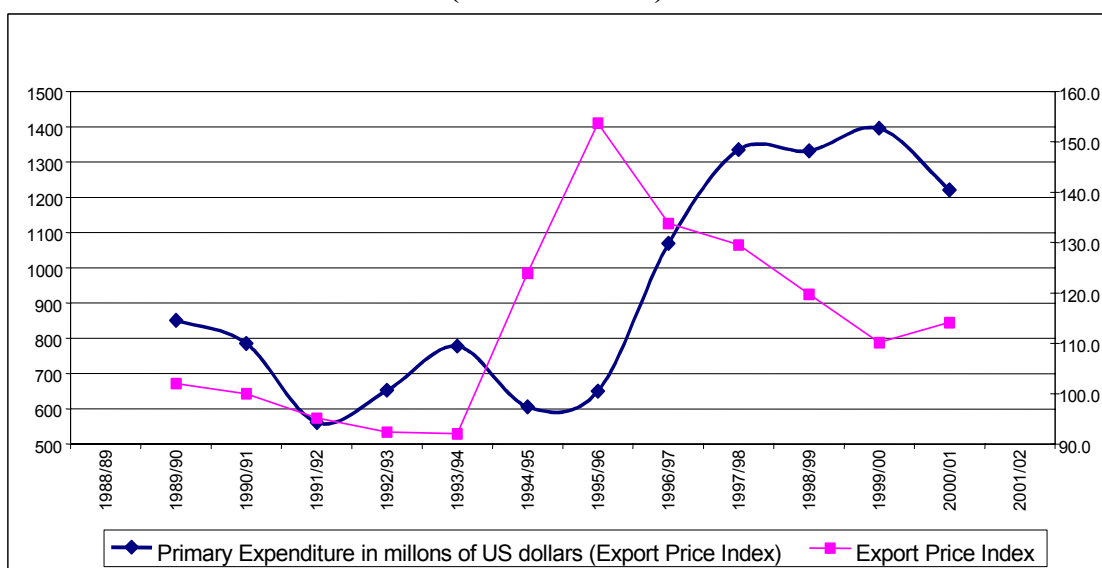
	Aver. 90-95	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
<b>Total Debt (JS M)</b>	130,025	196,364	219,215	262,303	308,688	380,641	494,887
<b>Debt Variation</b>	29,606	2,521	22,851	43,088	46,385	71,953	114,246
<b>Total Debt (US\$ M)</b>	5,571	5,530	6,133	7,127	7,699	8,658	10,648
<b>Debt Variation</b>	(162)	261	603	993	572	960	1,990
<b>Public Sector Balance (US\$ M)</b>		(145)	(103.5)	(421.5)	(558.50)		

Source: Budget Memorandum 2002/03 Chapter 5 Page 7, and Table 3

**Figure 3.1 Central Government Primary Expenditure (in US\$ million)**



**Figure 3.2 Central Government Primary Expenditure (Export Price Index) (in US\$ million)**



### 3.2 Public Debt Sustainability

At the end of March 2002 Jamaica had a public debt of 133% of the country's GDP or more than five times its annual tax revenues. The public debt has grown in the last year to absorb the cost of the banking crisis (about 36% of the GDP is explained by the fiscal cost of the restructuring of the financial system). But in any case the public debt looks high compared to other emerging economies (see Table 9). It is the highest as a fraction of the GDP of the countries shown in the table and one of the highest as a fraction of tax revenues.<sup>44</sup>

**Table 9. Public Debt in Emerging Countries in 2001**

	Debt/GDP	Debt/TR
Jamaica	133%	530%
Argentina (2002)	120%	873%
Philippines	109%	849%
Indonesia	103%	696%
Israel	94%	244%
Bulgaria	82%	213%
South Africa	75%	304%
Brazil	75%	251%
Turkey	65%	211%
Argentina (2001)	64%	305%
Thailand	60%	425%
Hungary	54%	144%
Russia	54%	318%
India	51%	861%
Colombia	45%	340%
Chile	42%	203%
Taiwan	42%	288%
Peru	40%	326%
Malaysia	36%	251%
Poland	35%	177%
Venezuela	34%	387%
Argentina (1992)	33%	155%
Korea	29%	161%
China	28%	244%
Mexico	28%	262%
Czech Rep.	20%	78%
Hong Kong	0%	0%

Source: Goldman Sachs and own estimates for Argentina and Jamaica

<sup>44</sup> The countries included in the table are those listed by Goldman Sachs. Public Debt and Tax Revenues include the figures for subnational governments in federal countries. Figures are for 2000 or 2001, with the exception of Jamaica (March 2002) and Argentina for which we show three different dates to show the large change in the value of public debt after the abandoning of the convertibility law.

The composition of the public debt of Jamaica has changed in the last decade. Domestic debt (issued in J\$ or in USD) has grown from 26% to 61% of the total public debt, and concessional debt (both from bilateral and multilateral sources) has declined from 62% of the total debt in FY 1990 to 21% in FY 2001, explained by a growing access to capital markets and the issuance of bonds to compensate the costs of the financial crisis.<sup>45</sup> About 15% of the stock of domestic debt has been issued in foreign currency at interest rates that are similar to those paid on bonds issued abroad in voluntary capital markets (between 10 and 11% in USD in March 2002), and the remaining 85% has been issued in local currency at interest rates that basically follow the rate on Treasury Bills (14.30% annual yield in March 2002). Table 10 shows the composition of the public debt as of March 31, 2002 including an estimate of the average interest rate paid on each type of debt.

**Table 10. Structure of the Jamaican Public Debt as of March 2002**

Source of Financing	Share in total debt	As a fraction of the GDP	Average interest rate
External Debt	39.4%	52.4%	7% in USD
Bilateral	10.1%	13.4%	4%
Multilateral	10.6%	14.1%	6.5%
Commercial	2.9%	3.9%	10.5%
Bonds	15.9%	21.1%	11.5%
Domestic Debt	60.6%	80.6%	15% in J\$
Issued in USD	9.1%	12.1%	11% + Depreciation
Issued in J\$	51.5%	68.5%	14.3% in J\$
Total Public Debt	100.0	133%	9.5% in USD (equiv)

In assessing public debt sustainability it is easy to estimate the primary surplus needed to maintain the public debt to GDP ratio constant over time. But there are two reasons to expect that over time the public debt of Jamaica will need to be reduced as a fraction of the size of the economy: concessional debt (from bilateral and multilateral sources) is somewhat high running at 28% of the country's GDP<sup>46</sup> and debt issued under commercial terms also looks very high compared with other emerging countries (running at 105% of the GDP). The first assumption leads to higher interest payments in the steady state if concessional debt is replaced by debt issued at market rates or to a higher fiscal effort if it has to be repaid. The second assumption obviously implies a stronger fiscal effort.

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<sup>45</sup> Fiscal Years in Jamaica end at the end of March.

<sup>46</sup> We use the term "concessional" for debt issued at favorable rates for Jamaica compared with those rates paid in external and domestic bonds.

In a recent paper Edwards (2002) has developed a framework that allows to calculate the fiscal effort needed under different assumptions about the demand for public bonds of an economy with high debt both from concessional and market sources. The required primary surplus to maintain a constant debt/GDP ratio is corrected to include several alternatives about the behavior of multilateral and bilateral financing and about the behavior of debt issued in the market. In the most optimistic scenario in which the ratio of public debt in a highly indebted economy can be maintained indefinitely, the required primary surplus as a fraction of the GDP becomes:<sup>47</sup>

$$(1) \text{ ps} = [d/(1+g+p^*)] [rc \text{ dc} + r \text{ dd} - (g+p^*)] - (g+p) \text{ b}$$

where,

ps is the primary surplus as a fraction of the GDP

d is total public debt as a fraction of the GDP

g is the real growth rate

p\* is the international inflation rate

rc is the concessional interest rate in US\$

dc is concessional debt as a fraction of total public debt

r is the market interest rate in US\$

dd is the commercial debt as a fraction of total public debt

p is the domestic inflation rate

b is the monetary base as a fraction of the GDP

Obviously  $dc + dd = 1$ , and for simplicity it is assumed that all debt has been issued in foreign currency.

The required primary surplus is reduced to account for the optimal inflation tax and seignorage  $(g+p) \text{ b}$ . It increases the larger the difference between the weighted average interest rate and the growth of the nominal GDP (both measured in foreign currency).

However, in countries like Jamaica that have a large exposure with the bilateral and multilateral community (28% of the country's GDP) concessional debt may be required to decline.<sup>48</sup> If one assumes that the concessional debt is maintained constant in nominal dollars, growth in the nominal GDP will make the ratio of concessional debt to the GDP equal to zero in the long run. Therefore, equation (1) becomes:

$$(2) \text{ ps} = [d/(1+g+p^*)] [r \text{ dd} - (g+p^*)] - (g+p) \text{ b}$$

Table 11 includes a simulation for the primary surplus required in both cases, which assume that commercial debt can be maintained in 105% of the GDP. It follows that one

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<sup>47</sup> Edwards derives equations for the steady state required primary surplus (similar to equation 1) and also for the dynamics from year 1 until the steady state is reached.

<sup>48</sup> Jamaica, by being a member of the Commonwealth, may have more room than other emerging economies to get access to concessional and commercial debt. But in any case debt ratios are very high. The following exercise is flexible enough to allow the reader to find the primary surplus needed to achieve any desired debt to GDP ratio.

point more of GDP growth reduces the required primary surplus in the steady state by about 1.5% of the GDP, while a reduction of 100 basic points in the market interest rate<sup>49</sup> in USD faced by the Treasury of Jamaica requires a primary surplus about 1.25% of the GDP lower.<sup>50</sup>

Looking at the figures in Table 11 it can be concluded that the primary surplus of about 10% of the GDP achieved by the government of Jamaica at the end of the 1990's exceeds, which is necessary to achieve long run fiscal sustainability even under conservative assumptions of the evolution of real growth and market interest rates faced by the Jamaican Treasury. However, this conclusion would be wrong for two reasons:

**Table 11. Required Primary Surplus in the Long Run  
(% of the GDP)**

(r) Commercial Interest Rate in USD	(g) Growth Rate (real GDP)		
	1%	2%	3%
	<b>Case 1:</b> dc is constant. Steady state d is 133% of GDP		
9%	5.52%	4.09%	2.68%
11%	7.55%	6.10%	4.67%
13%	9.58%	8.11%	6.67%
	<b>Case 2:</b> Concessional debt is constant in nominal USD. In the steady state dc is zero and dd is 133% of GDP.		
9%	6.47%	5.03%	3.61%
11%	9.04%	7.57%	6.13%
13%	11.61%	10.12%	8.65%

Assumptions: dc is 28%, dd is 105%, p\* is 2.5%, rc is 5.5%, p is 5% and b is 10% of the GDP

On the one hand because it is not reasonable to assume that Jamaica will be able to maintain in the long run a public debt to GDP ratio so high as it is implicit in the simulations of Table 11. If the country wishes to achieve higher growth the perception of

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<sup>49</sup> Interest rates are shown in nominal USD. The exercise assumes a US inflation of 2.5%. Therefore the real interest rates implicit in Table 11 are 6.5%, 8.5% and 10.5% which cover a wide range of possible outcomes in a highly indebted economy.

<sup>50</sup> A 100 basic point change in the concessional interest rate does not have a significant impact on the required primary surplus. The impact of 1% change in the international inflation rate is equivalent to the impact of a 1% change in the real growth rate. A domestic inflation higher than 5% will not yield additional revenues because the maximum inflation tax and seignorage are usually maximized at this rate (see Edwards 2002 for more details).



a public debt overhang needs to be eradicated completely.<sup>51</sup> On the other hand because one needs to add other factors to the required steady state primary surplus like the self insurance for contingencies (natural disasters and the like so frequent in the region)<sup>52</sup> and like the financial cost of the pension reform given that an easy access to the markets to finance the transition with debt is not assured.<sup>53</sup>

Table 12 shows the evolution of the public debt and the primary surplus of selected years if one assumes that both the concessional and commercial debts will be constant in nominal USD. In this case growth in the nominal GDP in USD reduces the debt ratio to 53% of the GDP. That lower rate requires a much lower primary surplus in the steady state (2% of the GDP), given the higher fiscal effort of the first years that allows a substantial reduction in the public debt (both concessional and commercial).<sup>54</sup> Again, to these figures it has to be added any fiscal self-insurance for natural disasters and a big fraction of the transition cost of a potential pension reform.<sup>55</sup>

**Table 12. Simulations for Primary Surplus and Public Debt (% of the GDP)**

Year	Primary Surplus	Concessional debt	Commercial Debt	Total public Debt
2002	9.9%	28%	105%	133%
2003	12.4%	26.8%	100.5%	127.3%
2008	9.8%	21.5%	80.6%	102.1%
2013	7.7%	17.3%	64.7%	82.0%
2018	6.1%	13.8%	51.9%	65.8%
2023	4.7%	11.1%	41.7%	52.8%
Steady State	2.0%	11.1%	41.7%	52.8%

Assumptions:  $g+p^*$  is 4.5%,  $rc$  is 5.5%,  $r$  is 11% and seignorage is 0.7% of the GDP. Both concessional and commercial debts are constant in nominal dollars in all years.

<sup>51</sup> Jamaica has been able to tap debt markets with bonds issued at 12% interest that in March were trading at internal rates of return of about 10 to 11%. One can quickly conclude that debt can be renewed at those rates indefinitely. However, there is something missing in that explanation. Rates faced by the government are tax free. An equivalent rate for the private sector in equity financed projects would be about 16.5% ( $11/(1-CIT)$  rate). Those high rates may be one explanation for the low growth observed in Jamaica in the past two decades. Moreover, the interest rate on the public bonds does not match the Maastricht criteria for interest rate spreads (150 bpb over the lowest rate of member countries) which for Jamaica would be about half of the interest rate in domestic currency that was paid by the Treasury in March 2002.

<sup>52</sup> This self insurance will amount to about 0.5% per annum if one assumes that the disaster requires an extra fiscal effort of 5% of the GDP every ten years.

<sup>53</sup> A pension reform from a pay as you go system to a capitalization scheme will create only a financing problem to the government to the extent that is balanced in actuarial terms (a higher deficit today leads to a lower debt tomorrow). But this requires perfect capital markets. To the extent that they do not exist the government may face some problems to get the financing as the Argentine experience of the late 1990's proves.

<sup>54</sup> Figures in Table 12 have the same assumptions that required a 6.10% primary surplus in Table 11, i.e. real growth of 2%, international inflation of 2.5% and commercial interest rate of 11%.

<sup>55</sup> The convergence to a lower primary surplus may be faster given that one should expect lower commercial interest rates as the public debt burden is reduced substantially.

There is a question about the political possibility of maintaining double-digit primary surpluses. In fact, Jamaica achieved very high primary surpluses in the early 1990's and that discipline was broken in the midst of a financial crisis. What the exercise about debt sustainability suggests is that the public sector in Jamaica is over indebted and this creates problems for growth because private investors, first, need to compete with the government for scarce funds and, second, they realize that they are exposed to increases in taxes to close the fiscal gap in a less conflictive way.

The exercise above tries to point out that traditional simulations of public debt sustainability are thought for countries that need to maintain the public debt to GDP ratio constant. Unfortunately, this is not the case of Jamaica. And this need to gradually reduce the public debt ratio has to be taken into consideration when the economic policy of the country is designed. Obviously the final target of primary surplus for any particular year depends on many variables, but policymakers need to bear in the back of their minds that they should always be biased towards a very cautious and prudent fiscal policy.

This suggestion is reinforced when the maturity of the public debt is analyzed. The government of Jamaica has been able to extend the maturity of both external and domestic debt but when the size of the debt is taken into account the needs of financing only for amortization of the principal are substantial. On top of this one needs to add the interest component for every year. Table 13 shows that the average annual amortization need is 12% of the GDP in the first year and raises to 13.7% in the following four years. Together with interest payments of a similar amount, the ex-ante financing needs of the government are about 25% per year in the next five-year period, a very high number for an emerging economy. Again this calls for a substantial primary surplus.

**Table 13. Maturity Profile of the Public Debt (in % of the GDP)**

	<b>% of GDP</b>	<b>&lt; 1 yr.</b>	<b>1 to 5 yr</b>	<b>5 to 10 yr</b>	<b>&gt; 10 yrs</b>
Domestic	80.60%	9.67%	42.72%	14.51%	13.70%
External	52.40%	2.62%	12.05%	17.82%	19.91%
Total	133.00%	12.29%	54.77%	32.32%	33.61%
Average Amortization		12.29%	13.69%	6.46%	



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