

International Studies Program

Working Paper 04-28
December 2004

Corporate Income Tax and Tax Incentives

Mark Rider



Georgia State
University

Andrew Young
School of Policy Studies

Corporate Income Tax and Tax Incentives

Working Paper 04-28

Mark Rider
December 2004

International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-3996
Email: ispaysps@gsu.edu
Internet: <http://isp-aysps.gsu.edu>

Copyright 2001, the Andrew Young School of Policy Studies, Georgia State University. No part of the material protected by this copyright notice may be reproduced or utilized in any form or by any means without prior written permission from the copyright owner.

International Studies Program Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to two academic departments (economics and public administration), the Andrew Young School houses seven leading research centers and policy programs, including the International Studies Program.

The mission of the International Studies Program is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

The International Studies Program at the Andrew Young School of Policy Studies is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies and private sector institutions.

The success of the International Studies Program reflects the breadth and depth of the in-house technical expertise that the International Studies Program can draw upon. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not to merely provide technical prescriptions for policy reform, but to engage in a collaborative effort with the host government and donor agency to identify and analyze the issues at hand, arrive at policy solutions and implement reforms.

The International Studies Program specializes in four broad policy areas:

- **Fiscal policy**, including tax reforms, public expenditure reviews, tax administration reform
- **Fiscal decentralization**, including fiscal decentralization reforms, design of intergovernmental transfer systems, urban government finance
- **Budgeting and fiscal management**, including local government budgeting, performance-based budgeting, capital budgeting, multi-year budgeting
- **Economic analysis and revenue forecasting**, including micro-simulation, time series forecasting,

For more information about our technical assistance activities and training programs, please visit our website at <http://isp-aysps.gsu.edu> or contact us by email at ispaysps@gsu.edu.

Corporate Income Tax and Tax Incentives

Mark Rider

Andrew Young School of Policy Studies, Georgia State University

Abstract

The Corporate Income Tax (CIT) in Jamaica is an important source of revenue. In 2002, the share of CIT in total tax revenue was approximately 6.9 percent, having fallen from 12.7 percent in 1993. Although OECD countries generally collect about 10 percent of tax revenue from corporate taxes, the downward trending share exhibited by the CIT in Jamaica is generally consistent with international experience. In fact, the share in Jamaica may be greater than expected given the large number of tax incentives and administrative weaknesses in the enforcement of Jamaica's CIT.

Table of Contents

List of Tables	iv
Executive Summary	v
Introduction	1
Part I: Jamaica's Corporate Income Tax	4
Overview of Jamaica's CIT	4
Definition of chargeable income	4
Point of tax collection	7
Rates of income tax	8
Capital allowances	9
Depreciation of intellectual property	18
Accelerated depreciation	18
Capital allowances under incentive laws	19
Complexity of capital allowances	20
Definition of the income tax base	22
Interest payments	25
Inventory valuation	25
Employee remuneration	26
Deduction of taxes	27
Donations	28
Losses	29
A Brief Review of Major Behavioral Effects of Jamaica's CIT	31
Income shifting	32
User cost of capital	36
Effect of taxes on dividend policy	39
Debt versus equity finance	40
Performance of Jamaica's CIT	41
Administration of Jamaica's CIT	48
Major Features of the CIT in CARICOM Countries	58
CARICOM: Harmonization of CIT among member countries	61
Summary of the Major Issues with Jamaica's CIT	64
Part II: Jamaica's Tax Incentives	68
An Overview of Jamaica's Tax Incentives	68
Tax Incentives Offered by Other CARICOM Countries	70
Antigua	72
Bahamas	73
Barbados	73
Belize	74
Dominica	75
Grenada	76
Haiti	78
St Kitts	79
St Lucia	80
St Vincent and the Grenadines	82
Suriname	82
Trinidad and Tobago	83
Foreign Direct Investment: Comparisons among CARICOM countries	84

Revenue Cost of Jamaica’s Tax Incentives	86
Part III: Reform Options	91
Eliminate the Corporate Income Tax	91
Harmonize the corporate and individual income tax rates at 25 percent	91
Eliminate all CIT holidays	92
Technical Revisions to the CIT	92
Replace the CIT with a revenue neutral Business Value Added Tax (BVT)	93
Special CIT rate of 10 percent for hotels	94

List of Tables

Table 1: Summary of Individual Income Tax and Other Payroll Taxes.....	9
Table 2: Rates and Bases of Annual Allowances for Capital Expenditures, by Asset Type	12
Table 3: List of Industries Qualifying for Special Annual Allowances.....	14
Table 4: List of Basic Industries	15
Table 5: Marginal Tax Rates (MTR) on Income by Source	35
Table 6: Trends among Important Macroeconomic Indicators, for 1993 to 2002.....	43
Table 7: Trend in Reporting Compliance × Coverage Rates.....	46
Table 8: Number of Corporate Income Tax Returns and Assessments,.....	50
Table 9: Distribution of Corporate Income Tax Returns by Tax Year	52
Table 10: Number and Sum of Math Errors on Corporate Tax Returns, by Line	53
Table 11: Evidence of Corporate Income Tax Form Use Errors	57
Table 12: Major Features of the Corporate Income Tax in CARICOM Countries,	60
Table 13: Brief Description of Tax Incentives in Jamaica	69
Table 14: Tax Incentives Among CARICOM Countries,	71
Table 15: Foreign Direct Investment as a Percent of GDP among CARICOM Countries, between 1991 and 2002	87
Table 16: Revenue Cost of Tax Incentive, by Type of Tax.....	88
Table 17: Relief from Duty, GCT, and Stamp Duty, by Type of Tax Incentive	89

Executive Summary

The Corporate Income Tax (CIT) in Jamaica is an important source of revenue. In 2002, the share of CIT in total tax revenue was approximately 6.9 percent, having fallen from 12.7 percent in 1993. Although OECD countries generally collect about 10 percent of tax revenue from corporate taxes, the downward trending share exhibited by the CIT in Jamaica is generally consistent with international experience. In fact, the share in Jamaica may be greater than expected given the large number of tax incentives and administrative weaknesses in the enforcement of Jamaica's CIT.

In fact, the data show that the decline in corporate tax receipts as a share of GDP is due to a declining rate of voluntary compliance and/or growth in tax holidays. There is substantial evidence of problems with voluntary reporting compliance. Specifically, a substantial number of corporate tax returns are submitted after the filing date. In addition, many corporate tax returns contain math errors and form use errors. These problems prevent the tax administration from using computerized methods of verifying tax declarations.

Determining corporate profits is an inherently complex task. As a result, the CIT is a notoriously complicated tax, and Jamaica's is no exception in this regard. Jamaica taxes the worldwide income of residents of the island and the income of non-residents on a territorial basis: income derived from sources and activities undertaken in the island. Regarding deductions, the primary rule is that all disbursements and expenses *wholly and exclusively* incurred in acquiring the income are allowable deductions. Chargeable income of corporations is assessed at a flat rate of 33 1/3rd percent on the first dollar of chargeable income. The chargeable income of building societies is assessed at a rate of 30 percent (Section 30(2)). The income of approved farmers and building society's are

exempt from company tax. Income from capital assets or capital gains is exempt from income tax. The profits of corporations that are not quoted or listed on a recognized stock exchange are subject to double taxation. They are taxed once at 33 1/3rd percent as the chargeable income of the corporation, and they are taxed again when profits are distributed to shareholders at the recipient's rate.

There are approximately 12 Incentive Acts, which cover nearly every major industry in Jamaica, including tourism, mining, exporting industries, motion picture industry, shipping, agriculture, etc. Furthermore, the types of relief that are granted are quite generous. Many of these *Acts* provide for a 5 to 10 year tax holiday from most major taxes, including the corporate income tax, duties, and GCT. Many of them allow corporations to carry forward losses and capital allowances incurred during the holiday period for six years past the termination of the holiday.

There are a number of reasons to question the efficacy of such tax incentives as a means to increase investment and foster economic growth. While business people prefer low tax burdens to high tax burdens, all things else held constant, business people also find an educated labor force, low rates of crime, good transportation and communication networks attractive as well. Many of these characteristics depend in important ways on the level and quality of government expenditure. One often hears that major impediments to investment in Jamaica include the high costs of borrowing, the high costs of energy, and the high cost of security. It is difficult or impossible to compensate for deficiencies such as these through tax incentives. Furthermore, tax holidays are an inefficient way to encourage investment. Many investments that would have been made anyway benefit from the tax incentives as well as the additional or marginal investments induced by the tax incentives. Finally, a comparison of in-bound foreign direct

investment among CARICOM countries shows that Jamaica's performance is about average despite the comparative generosity of Jamaica's incentive regime.

The major concern with Jamaica's CIT is the large number of incentives. The tax incentive regimes distort the allocation of capital, imposes capricious tax burdens on companies, and narrows the tax base which means that companies that do not benefit from a tax holiday must pay a higher rate of tax in order to raise a given amount of tax revenue. The incentive regime also adds to the difficulty of enforcing the CIT, which, under the best of circumstances, is a challenging tax to enforce.

The following is a summary of the CIT along the lines of the tenets of a "good" tax:

1. Revenue Adequacy:

Evaluation: Due to the large number of tax incentives (i.e., CIT holidays), the tax base is unnecessarily narrow. The revenue-income elasticity is 0.42, which implies that a 10 percent increase in GDP would result in a 4.2 percent increase in corporate tax receipts.

Issues: The revenue elasticity is indicative of a very weak relationship between economic growth and corporate tax receipts. In part, this is due to international trends that make it increasingly difficult to tax corporate profits due to the growth of tax avoidance schemes and the complexity of corporate finance. However, the large number of incentives and weak administration also significantly contribute to this trend.

Reform Directions: The Government of Jamaica needs to make a fundamental decision regarding the future of the CIT. Either Jamaica will continue to rely upon the CIT as a major source of revenue for efficiency and equity reasons or Jamaica will abolish the tax in order to attract investment and re-direct tax administration resources to higher yielding taxes, such as the GCT and PAYE. There are strong arguments on both sides.

2. Equity:

Evaluation: The CIT undoubtedly increases the progressivity of Jamaica's tax system. However, tax holidays compromise the contribution that this tax can make to the progressivity of the tax system.

Issues: Non-compliance and tax holidays compromise the vertical and horizontal equity of Jamaica's tax system. This may lead to a belief that the tax system favors the well connected and lead to low tax morale and dissatisfaction among the public.

Reform Directions: Eliminating or significantly rolling back the tax incentive regime would increase the horizontal and vertical equity of Jamaica's tax system.

3. Efficiency:

Evaluation: The tax incentive regime and differential taxes by source of income distort the allocation of capital and create incentives for people to shift income in order to avoid tax. Such distortions reduce the efficiency of the tax system.

Issues: Differential tax treatment of income by source creates incentives for people to shift income in order to reduce their tax burdens. This erodes the efficiency, equity, and revenue performance of Jamaica's income tax system. Furthermore, the system of tax incentives and the tax preferences for Building Societies, Venture Capital Firms, and Approved Farmers, among others, distorts the allocation of capital. In other words, investment decisions may be led by tax considerations rather than seeking the highest rate of return, which may explain, at least in part, Jamaica's stagnant growth rate in recent years.

Reform Directions: Jamaica could reduce or eliminate tax differentials by source of income and eliminate or significantly roll back the tax incentive regime.

4. Simplicity:

Evaluation: Under the best of circumstances, the CIT is not a simple tax. There are a number of features of Jamaica's CIT that makes the tax significantly more complex than it otherwise would be.

Issues: The incentive regime further complicates Jamaica's CIT. In addition, the system of capital allowances is needless complex.

Reform Directions: Jamaica could simplify the CIT by simplifying the capital allowances along the lines proposed by CARICOM, and eliminating or significantly rolling back the tax incentive regime.

To address these concerns, we have developed five possible reform options, and insofar as possible, have estimated their revenue impact. This list should be considered illustrative of the types of reform options that could be considered for the corporate income tax.

Harmonize the corporate and individual income tax rates at 25 percent*Benefits:*

- This would eliminate some of the incentives to shift income in order to take advantage of tax differentials.
- The tax system would be more neutral regarding the corporate form of organization.
- Cutting the corporate tax rate by approximately 24 percent would lower the cost of capital and, thereby, stimulate investment and job creation.

Costs:

- Assuming a modest behavioral response to the tax rate reduction of 0.49 percent increase in chargeable income for every 1 percent decrease in the corporate rate, cutting the corporate rate to 25 percent would cost J\$1.39.8 million in corporate tax receipts or an approximately 1 percent of total tax revenue, on an FY 2002/03 receipts baseline.
- Depending on the tax offset, harmonizing the individual and corporate rates at 25 percent would make the overall tax system more regressive.

Eliminate all CIT holidays*Benefits:*

- This would increase tax receipts by at least J\$733.7 million, on an FY 2002/03 basis, if there is no grandfathering of existing tax holiday agreements.
- This would create a more level playing field for all business.
- This would simplify the administration of the tax system.
- This would greatly increase the horizontal equity of the tax system, and this may even increase the vertical equity as well.

Costs:

- Businesses currently benefiting from tax holidays would experience an increase in their taxes.
- The government would be renegeing on a promise to grant a tax holiday for an investment of a certain size. The government could agree to grandfather all firms that have an existing agreement with the government.

- If there is a grandfather for existing tax holidays, then the proposal would not be revenue neutral.

Technical Revisions to the CIT

Simplify capital allowances by reducing the number of asset types to five (5) and eliminating the special treatments for Basic Industries, etc., expand the definition of intellectual property for depreciation purposes, and allow the LIFO method of inventory valuation

Benefits:

- This would simplify tax system, which would benefit administration and compliance. These revisions would take Jamaica's CIT a long way toward bringing it into conformance with the harmonization proposals of CARICOM, described above.
- This would create greater incentives for firms to invest in research and development.
- This would eliminate one of the obstacles that may be preventing some firms from locating in Jamaica or expanding their operations here.
- This would partially protect firms from inflation.
- This would eliminate one of the obstacles to restructuring failing enterprises in Jamaica.

Costs:

- This may be a small revenue loser, but the revenue effects very difficult to estimate with available data.
- Depending on the revised depreciation rules, this may increase the user cost of capital and discourage investment and job creation. It would be possible to revise the depreciation rules in such a way as to leave the user cost of capital unchanged.

Replace the CIT with a revenue-neutral Business Value Added Tax (BVT)

Briefly, a BVT would tax company profits, payroll, and interest expense at a flat rate.¹

¹ For a discussion of a BVT see *Jamaica: Business Tax and Incentive Reform*. Foreign Investment Advisory Services. November 2003.

Benefits:

- A flat-rate BVT would improve the horizontal equity of the tax system and broaden the tax base thus increasing the perceived fairness of the taxation of business income.
- Since a flat-rate BVTR is more neutral than the current CIT with tax holidays for approved investments in certain sectors of the economy, a flat-rate BVT would improve the allocation of capital to those investments with the highest rates of return.

Costs:

- Companies subject to the BVT would still have to compute corporate profits, so there would not be any reduction in the costs of compliance or administration.
- In the case of the BVT, the United States Internal Revenue Service only allows companies to claim tax credits for the portion of the tax that falls on company profits. Since a revenue neutral BVT rate on a broader tax base would be considerably lower than the current CIT on a much narrower tax base, the amount tax credits would fall. In effect, there would be a transfer from the Jamaican Treasury to the U.S. Treasury.
- There may be considerable adjustments costs for companies and individuals to adjust to the new tax regime.

Special CIT rate of 10 percent for hotels

Harmonize the CIT and PIT rates at 25 percent, eliminate all CIT & PIT tax holidays with a special rate of 10 percent for hotels (grandfathering all existing commitments).

Benefits:

- Eliminating income tax holidays would broaden the base and make the tax system more neutral, and, thus, capital would be allocated more efficiently.
- Hotels would contribute more to the Treasury for the government services that they use, such as roads, sewage, police, etc.
- Reducing the CIT to the PIT rate would lower the user cost of capital and stimulate investment.
- Eliminating income tax holidays would simplify administration of the CIT.

Costs:

- By grandfathering existing commitments of the government, there would be a loss of approximately J\$1.39.8 million in corporate tax receipts, or an approximately 1 percent of total tax revenue, on an FY 2002/03 receipts.
- Eliminating income tax holidays and subjecting hotels to the CIT even at a 10 percent rate is likely to lead to opposition from sectors that are adversely affected.

Corporate Income Tax and Tax Incentives

Introduction

In evaluating any tax system, it is important to keep in mind the policy goals of the country, the country's economic strengths and weaknesses, as well as the normative criteria of revenue yield, efficiency, equity, and administrative and compliance costs of the tax system. One should also be mindful that a tax system is just that - a system. As such, the pieces must fit together and complement one another.

The purpose of this study is to evaluate the Corporate Income Tax (CIT) and Tax Incentives in Jamaica. In terms of the CIT, it is very important to be mindful of the fact that it is just one piece of a general tax on income from all sources. In order for an income tax to work properly, the various pieces of that tax – corporate and individual – must fit together and support the fiscal and non-fiscal policy goals of the country. In this report, we place a great deal of emphasis on the importance of making sure that the corporate and individual pieces of income tax work together and that they do not create perverse incentives.

In many important ways, Jamaica operates three different tax regimes. First, there is the CIT that is described in the *Income Tax Act* of Jamaica. While the CIT could be improved in several technical aspects, which are discussed in some detail below, generally speaking it is a well designed tax. Second, many businesses working in sectors such as tourism, manufacturing, and mining, among others, are exempt from paying CIT for considerable periods of time – 5 to 16 years – due to a number of *Incentive Acts*.

Third, there is the opportunity for non-compliant firms to seek waiver of interest and penalty for late payment and non-payment of tax liability and even tax liability.

Taken as a whole, these three tax regimes constitute a highly complex tax system that imposes arbitrary and capricious tax burdens on firms. This complexity makes the CIT very difficult to administer. In fact, we find that voluntary reporting compliance by corporations appears to be very low and declining. If the CIT is to continue to be a viable tax in Jamaica, then this decline in voluntary reporting compliance should be reversed. In order to reverse it, however, it is necessary to understand the factors that are contributing to the decline in reporting compliance. The lack of credible tax enforcement is an important factor.

Another factor that is much more difficult to quantify is the effect on voluntary reporting compliance of the unequal tax burdens imposed by the tax regime. As noted, there are actually three regimes that when combined impose arbitrary and capricious tax burdens on otherwise similarly situated firms. In other words, corporations that pay 33 1/3rd percent on their profits must compete for customers against firms that enjoy a considerable cost advantage because either they are officially exempt from the CIT due to an *Incentive Act* or they are non-compliant and pay less tax.

Many Jamaican corporations appear to adopt a “catch me if you can” attitude toward paying their profits tax liability. We will provide evidence that many firms file their returns substantially after the due dates established in law, and otherwise delay paying tax. Even if one pays the full amount of tax owed, paying a tax late without having to pay penalties and interest for late payment is equivalent to an unofficial tax cut due to the time value of money. If a substantial number of firms avoid paying tax due to

tax holidays or non-compliance, then compliant firms will either be driven out of business or find a legal or illegal way to avoid paying tax. This appears to be the dynamic at play in Jamaica. Voluntary compliance is declining and, as a result, the revenue yield of the CIT is declining as well. If the government would like to reverse these trends, or at least slow them down, then it should strengthen administration and enforcement of the CIT and create a less complex and more uniform tax.

This study is organized as follows. We begin by briefly describing major features of the *Income Tax Act*, especially as it applies to corporations. Second, we describe aspects of the *Act* that would benefit from technical improvement. Third, we analyze the revenue performance and administration of the CIT. Fourth, we briefly describe the major tax incentives, and their revenue cost. We conclude with a discussion of several reform options.

Part I: Jamaica's Corporate Income Tax

Overview of Jamaica's CIT

Below is a brief review of Jamaica's *Income Tax Act*, with an emphasis on the taxation of company profits.

Definition of chargeable income

Clearly the ability to identify income is necessary to operate an income tax. Section 5 of the Jamaican *Income Tax Act* defines the sources of income subject to tax, and Sections 13 and 15 describe allowable and prohibited deductions, respectively. Broadly speaking *chargeable income* of Jamaican residents includes annual profits from any trade, business, profession, employment or vocation whether carried on in the Island or elsewhere and profits from any kind of property wherever situated. In particular chargeable income includes dividends, discounts, interests, annuities, pensions, rents, royalties, and premiums. Regarding non-residents, chargeable income includes profits arising from any property whatever in the island or from any trade, business, profession, employment or vocation exercised within the island. In short, Jamaica taxes the worldwide income of residents of the island and the income of non-residents on a territorial basis: income derived from sources and activities undertaken in the island.

The Income Tax Act does not explicitly define income, profits, or gains. Their precise legal meaning has been arrived at by a process of judicial interpretation of the statutory words. For a receipt to be taxable income:

- (i) there must be a source to which it can be related and which is described specifically or by implication in Section 5, and
- (ii) it must NOT be a capital receipt or capital gain.

Finally, profits or gains are the balance of receipts and expenditure arrived at according to the *ordinary rules of accounting* subject to the provisions of *The Income Tax Act* as to whether any particular receipt is a proper subject of charge; any particular deduction is expressly prohibited or falls outside the definition of allowable deductions; and that neither receipts nor expenditures are capital items. Regarding deductions, the primary rule is that all disbursements and expenses *wholly and exclusively* incurred in acquiring the income are allowable deductions.

Section 13(1) expressly provides for the deduction of the following expenses or disbursements:

- (i) interest paid on capital employed in acquiring the income;
- (ii) rent and repairs to buildings employed in acquiring the income and rates, taxes (excluding income tax), and insurance premiums paid on such property;
- (iii) repairs to plant and machinery employed in acquiring income;
- (iv) bad debts and doubtful debts to the extent they are estimated to be bad, but recoveries must be treated as receipts when recovered;
- (v) capital allowances under the First Schedule or wear and tear of a building used for the purpose of acquiring the income;
- (vi) losses, which had they been profits would have been taxable;
- (vii) contributions paid to certain superannuation funds and widows' and orphans' funds;
- (viii) annuities or other annual payments secured by deed of covenant for at least five consecutive years in favor of University of the West Indies or College of Arts, Science, and Technology;
- (ix) *National Insurance Act* contributions, subject to certain provisions; and
- (x) certain donations.

It is interesting to note that the deductions under (iv) and (v) through (x) would not be allowable, except for these provisions. *The Income Tax Act* provides for the deductibility of items (vii) through (x) because these are believed to be worthy social purposes. Clearly these items would not be allowable deductions under the “*wholly and exclusively*” doctrine discussed above. It should be noted that Jamaica is not exceptional in providing tax relief for such expenditures. Many countries provide for favorable tax treatment of similar items. Similarly, most countries allow firms to deduct bad debts (iv) and losses (vi).

Turning to item (v), the “*wholly-and-exclusively*” doctrine does not provide for the taxation of income from capital assets; thus, this doctrine does not provide for the deductibility of expenditures on plant and equipment. Strictly speaking, the purchase of plant and equipment is simply the exchange of one asset - say cash - for another capital asset, such as plant and equipment. However, capital assets are subject to wear and tear in the process of acquiring income from trade, business, etc. Accordingly, *The Income Tax Act* provides for depreciation of capital assets through a set of prescribed rules set forth in the First Schedule of *The Income Tax Act*. Again, most countries provide for deductions from chargeable income for depreciation of capital assets. Depreciation rules are one of the most technical and important issues in tax policy design and will be discussed at length below.

In addition to the provisions discussed above, there are four further subsections to Section 13 dealing with allowable deductions. Sub-sections 13(2) and (3) deal with the application of Section 13(1)(a) to certain interest and preference dividends paid by corporations, which are necessitated by the company profits tax provisions of Section 34

dealing with distributions. Section 13(4) limits deductions allowable as expenses of management (other than audit fees) to one tenth of the investment income. Investment income as defined in Section 2 can only be income of a corporation from investments, and Section 13(4) must therefore be read as applying solely to corporations and their liability to company profits tax. Section 13(5) is an anti-avoidance provision aimed at the purchase of companies with tax losses for purpose of tax avoidance.

Section 15 prohibits the deduction of the following expenses or disbursements:

- (i) domestic or private expenses;
- (ii) capital withdrawn or any sum employed or intended to be employed as capital or in improvements;
- (iii) losses not connected and arising out of the trade, profession, vocation;
- (iv) sums recoverable under an insurance or contract of indemnity;
- (v) rent of or repairs of any premises or part thereof not incurred for the purpose of producing the income;
- (vi) amounts of United Kingdom income tax or surtax or Commonwealth income tax paid or payable; and
- (vii) sums to provide benefits to a principal member of a body corporate or his relatives in return for services, unless the sum is commensurate with the services rendered taking account of other perquisites or remuneration.

Point of tax collection

In general, *The Income Tax Act* establishes the following withholding rules for the income tax. Section 52(1) requires that the corporation shall pay tax on corporate profits. Section 38(1) requires that a corporation subject to income tax shall withhold tax on dividends at the prescribed rate of the recipient, which is to say at the individual or corporate rate. Finally, Section 31A(1) requires that any person who pays interest shall withhold tax at the prescribed rate of the recipient.

Incomes exempt from corporate tax

The Income Tax Act exempts the following sources of income from corporate tax:

- (i) any preference dividend paid by a corporation whose shares are quoted or traded on a recognized stock exchange (Section 13(3));
- (ii) any dividend paid out of income derived from the sale of capital assets of the corporation (Section 35(1));
- (iii) any dividend paid by an approved venture capital company (Section 36c(1));²
- (iv) income derived exclusively from the carrying on by an *approved* farmer of a prescribed agricultural activity (Section 6);
- (v) the income of any corporation or association organized and operated exclusively for religious, charitable, scientific, or educational purposes (Section 12(h));
- (vi) the income of an approved superannuation fund or an approved retirement scheme (Section 12(j)); and
- (vii) income derived as interest from investments or deposits in a building society, investments under an approved scheme under the *Housing Act*, investments in an approved public utility, and an approved hotel enterprise under the *Hotel Incentives Act* or the *Resort and Cottages Incentives Act*.

Rates of income tax

The rates of income tax are specified in Section 30. Specifically, the chargeable income of persons is assessed at a rate of 25 percent on the amount in excess of J\$120,432; and the chargeable income of corporations is assessed at a flat rate of 33 1/3rd percent on the first dollar of chargeable income. The chargeable income of building societies is assessed at a preferential rate of 30 percent (Section 30(2))³. The income of approved farmers and building society's are exempt from company tax. Other activities

² Shareholders of an approved venture capital company are exempt from income tax as well (Section 38(A)).

³ Building societies and insurance companies are treated separately under the income tax. Building societies are taxed at a rate of 30 percent and insurance companies at 7.5 percent of taxable income minus management expenses. The treatment of these two types of entities will be discussed in a separate note (Bahl and Wallace, 2004).

exempt from tax for a fixed period due to incentive acts will be addressed below, however, incentive acts generally provide for 5 or 10 year tax holidays.

The profits of corporations that are not quoted or listed on a recognized stock exchange are subject to double taxation. They are taxed once at 33 1/3rd percent as the chargeable income of the corporation, and they are taxed again when profits are distributed to shareholders at the recipient's rate.

There are a number of taxes on payroll in addition to the 25 percent P.A.Y.E. rate. Table 1 summarizes these taxes. As will be discussed in greater detail below, such differential treatment of income by source creates incentives for income shifting to avoid or reduce one's tax liability. Income shifting is an example of legal tax avoidance. Income shifting may compromise the efficiency and equity of the income tax system, as discussed in greater detail below (see Section on Income Shifting below).

Table 1: Summary of Individual Income Tax and Other Payroll Taxes

Tax	Tax base	Tax rate
P.A.Y.E.	Wages and other emoluments	Flat Rate of 25 percent above J\$120,432
Education Tax	Wages and other emoluments Net of contributions to NIS	For PAYE: 5 percent Employer – 3 percent Employee – 2 percent
NIS Contribution	Wages and other emoluments Up to J\$500,000	For PAYE: 5 percent Employer – 2.5 percent Employee – 2.5 percent
NHT Contribution	Wages and other emoluments Net of contributions to NIS	For PAYE: 5 percent Employer – 3 percent Employee – 2 percent
HEART Tax	Wages and other emoluments employer whose monthly payroll exceeds J\$14,444	Employer – 3 percent

Capital allowances

Book depreciation is not an allowable deduction under the *Act* which, instead, provides for relief through assorted capital allowances. Industrial buildings and structures, such as mills, warehouses and buildings housing machinery, receive an *initial allowance* in the year of acquisition equal to 20 percent of cost. Plant and machinery receive this same accelerated depreciation treatment but industrial, nonresidential buildings (offices, showrooms, hotels, and retail shops) do not. Motor vehicles that qualify as trade vehicles are granted an initial allowance of 12.5 percent. These initial allowances are deducted from the cost of an asset in calculating the annual capital allowance to be claimed in subsequent years.

In addition to initial allowances, companies are also granted annual allowances in respect of capital expenditures. These annual allowances are generally computed on a declining-balance basis applied to the historical cost of each asset. For expenditures on plant and equipment, however, a company may elect to use a straight-line method for tax depreciation.

Under the declining-balance approach annual allowances are computed by applying a rate of depreciation to the amount of the capital expenditure (in the first year) or the written-down value of the asset in each succeeding year. For example, if a company purchased a general item of machinery for J\$1,000, its annual allowance for the year in which the expenditure was made would be 10 percent of the J\$1,000, or J\$100. The company could also claim an initial allowance of J\$200 in that year. In the following year the company would be able to claim 10 percent of the written-down value (J\$1,000 – J\$300) of the asset, or J\$70. The company would deduct 10 percent of the declining

balance in each succeeding year until the total cost of the asset were recovered or until the asset were sold or scrapped. Under the straight-line election the expenditure on the machine would be written off in equal portions over a specified number of years, such as J\$100 per year for 10 years.

The rates and bases of annual allowances for the various classes of assets are listed in Table 2. Industrial buildings are granted annual allowances of 2.5 percent to 5 percent on a declining-balance basis. Other nonresidential buildings are granted annual allowances of 2.5 percent on a straight-line basis. Residential buildings, even when owned by companies, do not qualify for any capital allowances. Expenditures for repairs or the acquisition or preparation of land do qualify for capital allowances either. The rates of annual allowances for various items or machinery and plant range between 2 and 25 percent when the declining-balance method is used.

If a company elects to use the straight-line method, the fraction of the capital expenditure that it is allowed to deduct in an arcane manner. The initial step of the computation is to calculate a percentage equal to “nine-tenths of the fraction of which the numerator is one and the denominator is the number of years in the anticipated normal working life of machinery or plant of that class.” If this percentage of the cost of an asset is written off each year, one-tenth of the cost of the asset would be left after the anticipated normal working life of the asset has passed. The second step of the computation is to multiply this percentage by five-fourths. The resultant fraction (equal to 1.125 divided by the anticipated normal working life of the asset) is then multiplied by the cost of the asset to obtain the annual allowances that may be claimed each year.

Table 2: Rates and Bases of Annual Allowances for Capital Expenditures, by Asset Type

Type of Asset	Initial Allowance (in percent)	Annual Allowance (in percent)
1. Adding machines	20	10
2. Bicycles	20	10
3. Buildings (concrete)	-	2.5
a.) Others	-	3
b.) Industrial	20	5
4. Cash registers	20	10
5. Compressors		
a.) Electric	20	10
b.) Other	20	7.5
6. Computers	20	22.5
7. Dipping tanks	-	25
8. Drilling machines	20	20
9. Dry docks	20	10
10. Electrical appliances	20	10
11. Fencing	-	2.5
12. Furniture and fixtures	20	10
13. Generators – steam	20	5
14. Hoists and cranes	20	7.5
15. Lighting plants		
a.) Electric	20	10
b.) Other	20	7.5
16. Machinery and plants	20	7.5
17. Motor cycles	12.5	12.5
18. Motor vehicles (trade)	12.5	12.5
19. Private cars	0	12.5
20. Scales	20	10
21. Spraying machines		
a.) Gas	20	20
b.) Others	20	7.5
22. Tractors (gasoline)	20	20
23. Wells		
a.) Concrete	0	2.5
b.) Perforated pipes	0	2
24. Wharves		
a.) Wood	0	5
b.) Concrete	0	2.5

Source: TAAD (Ainsley Powell)

The present value of the stream of initial, annual, and balancing allowances that the company can claim in respect of this asset depends on the lengths of the actual and

anticipated working lives of the asset, the method of depreciation that the firm elects to use, and the assumed discount rate. In most cases a company investing in plant or machinery can obtain a more valuable stream of annual allowances by depreciating an asset on a straight-line basis rather than a declining balance basis. The advantage of straight-line depreciation is apparent in a comparison of the present values of the streams of capital allowances available for an investment in machinery under the alternative methods of depreciation.

For example, suppose that a company purchases a J\$100,000 machine. Assuming a discount rate of 10 percent and the anticipated and actual working life of 10 years, the present value of the stream of initial, annual, balancing allowances computed on declining-balance basis is J\$64,318.77 versus J\$73,534.66 in the case of straight-line depreciation.

No annual allowances may be claimed if those allowances, when added to any initial allowance and to any previous annual allowances given in respect of the asset in question, will exceed the actual cost of the asset to the company. A company classified within a qualifying industry (listed in Table 3) may claim an additional *special annual allowance*, at the same rate as the annual allowance, for any of its machinery or plant that have been used for two or more working shifts per day throughout the year. Here again, the aggregate of all initial, annual, and special annual allowances granted in respect of a particular asset may not exceed the actual acquisition cost of that asset. The provision of this special annual allowance is, in effect, an acknowledgement that double-shifting an item of machinery or plant reduces the working life of the asset by half.

Table 3: List of Industries Qualifying for Special Annual Allowances

-
1. Canning and preserving of fruits and vegetables
 2. Canning and preserving of fish and other seafood
 3. Canning and preserving of meat
 4. The processing of agricultural products
 5. Manufacturing of sugar
 6. Manufacture of textiles
 7. Manufacture of footwear
 8. Manufacture of leather and leather products
 9. Manufacture of wooden prefabricated walls, doors, windows, other parts of a building
 10. Manufacture of plywood and wooden veneer
 11. Manufacture of articles of pulp, paper, or paperboard
 12. Manufacture of boxes, crates, drums, barrels, and other wooden containers
 13. Manufacture of paints, varnishes, and lacquers
 14. Manufacture of basic industrial chemicals including fertilizers
 15. Manufacture of glass and glass products
 16. Manufacture of china, pottery, and earthenware
 17. Manufacture of watches and clocks
 18. Manufacture of heavy machinery and metal products
-

Source: Jamaica *Income Tax Act*.

Capital expenditures on the search for or acquisition of oil or mineral deposits, and for the construction of any works which are likely to be of little or no value when the deposit is no longer worked, are granted both initial and annual allowances. The initial allowances in respect of these expenditures are equal to 20 percent of cost. The annual allowances are calculated as either one-twentieth of the written-down value of the asset or the written-down value of the asset multiplied by the following fraction:

$$\frac{\text{output of the deposit for the year}}{\text{output for the year} + \text{total potential future output of the deposit, as est. at end of the year}}$$

The second formula implies that the proportion of a capital expenditure that is deducted in a given year must be equal to the proportion that the output for that year represents of the total output that the deposit yields between the date the expenditure is made and the date that the deposit is exhausted.

A company may alternatively elect to have its annual allowance calculated on the written-down value or cost of the asset at a percentage determined by the Commissioner of Income Tax, based upon the likely date of cessation of work on the deposit and the probable value of the asset at that date. The Jamaican companies currently involved in the mining or quarrying of gypsum, marble, limestone, and silica sand are the only ones likely to use one of these formulas to determine their annual allowances. For those bauxite producers that continue to be taxed on the basis of output rather than net income, capital allowances are irrelevant to them.

Investment Allowances are available to companies in specified *basic* industries (listed in Table 4) in respect of capital expenditure incurred on buildings, plant, and machinery. This 20 percent allowance is given in place of an initial allowance and the major difference between the two is that the investment allowance is more generous, therefore, because it enables a company to claim larger annual allowances in respect of the asset. The company can actually write-off 120 percent of the cost of an asset.

Table 4: List of Basic Industries

A. MANUFACTURING

1. Canning and preserving of fruits and vegetables, that is to say -
 - a) canning (packing in air-tight containers) of fruits and vegetables including fruit and vegetables juices;
 - b) manufacture of preserves, jams and jellies, pickles and sauces, canned soups, dehydrating and quick freezing of fruits and vegetables.
2. Canning and preserving of fish and other sea foods including such operations as salting, drying, dehydrating, smoking, curing, pickling, packing in air-tight containers and quick freezing.
3. Canning and preserving of meat including such operations as curing smoking, salting, pickling, packing in air-tight containers and quick freezing.

4. Manufacture (not mixing) of grain mill products (except cornmeal and wholemeal) and stock and poultry feeds.
5. Manufacture of textiles, that is to say –
 - a) spinning, weaving and finishing textiles including the preparation of fibres for spinning.
 - b) Manufacture of knitted fabrics including bleaching dyeing and finishing of knitted products
 - c) Manufacture of cordage, rope, twine, and other related goods from hemp, jute, cotton, paper, straw, coir, flax and other fibres.
6. Manufacture of footwear.
7. Manufacture of leather and leather products.
8. Manufacture of wooden prefabricated walls, doors, windows and other parts of a building.
9. Manufacture of plywood and wooden veneers.
10. Manufacture of articles of pulp, paper or paperboard.
11. Manufacture of boxes, crates, drums, barrels and other wooden containers.
12. Manufacture of basic industrial chemicals including fertilizers.
13. Manufacture of paints, varnishes and lacquers.
14. Manufacture of glass and glass products.
15. Manufacture of heavy machinery and metal products.
16. Manufacture of watches and clocks.

A. CONSTRUCTION

Construction of buildings, ships, highways, streets, sewers and mains, railway roadbeds, piers, tunnels, bridges, dams, drainage projects, irrigation and flood control projects, hydro-electric plants, water power projects, pipelines and other heavy construction.

B. ELECTRICITY AND STEAM

1. Operating an electricity undertaking.

2. Production and distribution of steam for power purposes.

D. WAREHOUSES AND COLD STORAGE

The provision of warehouses or cold storage operated as an independent service.

E. DOCKS

Operation of a dock undertaking including any dock for repairing ships.

Source: First schedule of *The Income Tax Act*.

Special investment allowances, equal to 40 percent of qualifying capital expenditures, are available to cane farmers and sugar manufacturers. These allowances may only be deducted from income arising from approved activities. Qualifying expenditures include those for machinery and plant, farm, sugar factory buildings, certain staff houses, irrigation and sewerage works, and works designed for soil conservation. Any amount of a special investment allowance that is not utilized in the initial year of claim may be carried forward up to eleven years. In contrast, an initial or annual allowance that is not utilized in the year for which it is granted (i.e., it contributes to a tax loss for that year) may only be carried forward up to five years. Similar 40 percent investment allowances are granted for capital expenditures on ships and for many capital expenditures in the agricultural sector. Companies enjoying tax exempt status are not eligible for investment allowances or the special investment allowances for the sugar industry. There is no restriction of this type for agriculture or ships. No asset can be granted an initial allowance if any of the investment allowances have already been granted in respect of it.

When an asset is sold, scrapped, or otherwise ceases to be used in trade and the proceeds accruing to the company are less than the written-down value of the asset, the

company may claim a *balancing allowance* equal to the amount of this shortfall. If the proceeds exceed the written-down value of the asset a *balancing charge*, not to exceed the accumulated value of capital allowances claimed for that asset, is added to the company's chargeable income. There is no provision in the *Act* to prevent a company from depreciating the value of an asset below a reasonable salvage cost. Only initial and annual allowances are written off the value of assets for the purpose of calculating these balancing allowances or charges. Investment and special investment allowances are not reasonable in this manner.

Depreciation of intellectual property

Allowances are also granted for expenditures on scientific research and for patents. Research expenditures which are not of a capital nature may be expensed immediately; capital expenditures may be deducted at a rate of 20 percent on a straight-line basis over a five-year period. Expenditures on patents may be written off over the life of the patent up to a maximum of 14 years. The rate of this annual allowance is equal to the reciprocal of the number of years of the write-off period. However, these provisions do not cover copyright, trade marks, and general research and development. In light of the growing importance of intellectual property rights in international trade, *The Income Tax Act* should be amended to provide a more expansive definition of intellectual property.

Accelerated depreciation

Approved companies are permitted to depreciate assets over a two year period. This provision is used by only a handful of companies.

Capital allowances under incentive laws

The treatment of depreciation under Jamaican incentive legislation is difficult to characterize because provisions governing capital allowances vary across the relevant acts. The vast majority of companies that have been granted relief in the form of tax holidays can be classified into two groups: industrial firms or hotel/resort enterprises. Companies in the first group are governed by either the *Industrial Incentives Law* (IIL) or the *Export Industry Encouragement Act* (EIEL), both of which have treated depreciation identically since 1974 when Jamaica agreed to harmonize the tax incentives it offers to industrial firms with those offers to industrial firms with those offered by other members of CARICOM. Companies in the second group are governed by either the *Hotel Incentives Act* or the *Resort Cottages Incentives Act* which contain identical provisions regarding capital allowances. Provisions regarding initial allowances are the same for either group. Once a company has been granted a tax holiday it is not entitled to an initial allowance for any asset acquired prior to or during its tax exempt period. Similar exclusions apply to investment allowances for basic industries and to the special investment allowances for the sugar industry.

Every company in the industrial group of tax-relieved firms that has been granted a holiday since 1974 has had to depreciate the value of its assets at the normal rates of annual allowances even though these notional allowances cannot be claimed. After the end of the relief period genuine annual allowances may be calculated on the basis of the original cost of the assets less the notional depreciation accumulated allowances to this accumulated notional depreciation.

A company in the second group, relieved under either the *Hotel Incentives Act* of the *Resort Cottages Incentives Act*, receives no annual allowances during its holiday period and is not required to notionally depreciate its assets. After the expiration of the holiday, annual allowances are granted on the basis of the original costs of assets less any allowances.

Both types of tax-relieved companies have an incentive to postpone the replacement of their capital stock. If the hotel purchases an asset during its tax holiday it cannot begin to depreciate that asset until the holiday is over. By that time the depreciable value of the asset has fallen in real value. The industrial company has an even greater incentive to postpone investment because the real depreciable value of any asset purchased during its tax holiday is eaten away by both inflation and the notional annual allowances that it must deduct.

Complexity of capital allowances

By this point the reader should be thoroughly impressed with the complexity of Jamaica's current system of capital allowances. There are over 32 asset types listed in Table 2, there are special types of allowances for many different industries and special formulas, the rationales of which are not clear, for particular types of assets or industries, and there is a lack of consistency across incentive laws in the treatment of capital allowances. This complexity requires too much of the Income Tax Department's scarce administrative resources to be devoted to tasks such as verifying the qualifications of particular assets for special treatment, verifying page upon page of trivial computations for every asset owned by a company, and working through the more complicated balancing adjustments for every asset that is sold or scrapped.

A great deal of time and money must also be spent by the taxpayer in preparing his capital depreciation amounts each year. A typical account provides a row of 5 to 10 figures for each asset (written-down value brought forward, rate of annual allowances, amount of annual allowance, etc.) and large companies must account for hundreds of assets. Every asset disposition requires several lines of computations. Large companies have their financial statements and tax accounts prepared by major accounting firms which have no trouble in interpreting the code. A small firm, however, might have difficulty understanding the options available to it under the capital allowance schedule, and there is no taxpayer's manual or instructions which interprets this schedule into plain English.

Many countries have elected to avoid such complicated schemes by grouping assets into broad categories and treating them together. For example, the U.S. tax code defines five broad categories asset claims to which different depreciation rates apply. A company may set up a "mass asset account" for all assets of the same class that are placed into service in a given year. For example, suppose a company purchases three pieces of machinery for J\$100, J\$200, and J\$500, respectively, in 2003. If all of these machines are classified as five-year assets, the company would be able to aggregate their depreciable value (J\$800) and write-down their value over the years as if it pertained to a single asset. A company is not required to compute a balancing allowance or charge for every asset disposition; it simply adds the proceeds from sales of items from a mass account to its chargeable income (limited by the original cost). Dispositions of assets do not alter the written-down value of a mass-account, so that the aggregate original cost of the assets in the account can be fully recovered. Much effort would be spared on the part

of Jamaican taxpayers and tax agents if the government reduced its current set of asset classes from more than fifty to four or five and permitted the establishment of mass asset accounts. In fact, CARICOM is proposing that a simplified system of depreciation with five (5) asset types. The CARICOM proposal is a good recommendation and is described in greater detail below.

Definition of the income tax base

Public finance economists use their own definition of income as a standard by which to gauge the statutory definition of the income tax base. A widely accepted definition among economists is the so-called Haig-Simons (H-S) definition.⁴ According to this definition, income is the money value of the net increase in an individual's power to consume during a period. This is equal to the amount actually consumed during a period plus net additions to wealth. Net additions to wealth – savings – must be included in income because they represent an increase in potential consumption.⁵

It is worth mentioning here, for later reference, that Haig-Simon income includes accrued capital gains: accrued gains are additions to net worth. Since the market value of capital assets is difficult to determine, absent frequent trades in established markets, income tax systems typically include realized capital gains in the tax base instead of accrued gains. Nonetheless, this solution is properly viewed as a compromise with the practical problems of determining accrued gains. Taxing realized capital gains as opposed to accrued gains allows investors to defer tax until the capital asset is sold, and the old

⁴ See Harvey S. Rosen, *Public Finance*, 7th Edition, New York: McGraw-Hill, 2002, page 361.

⁵ See Harvey S. Rosen, *Public Finance*, 7th edition, New York: McGraw-Hill, 2002.

adage “a tax deferred is tax foregone” clearly applies in such circumstances. Therefore, taxing realized capital gains instead of accrued gains or not taxing capital gains at all provides an incentive to invest in capital assets, especially those assets – like land, collectables, etc – that appreciate in value over time but do not generate an annual income.

Using a comprehensive definition of income is important for several reasons. First and foremost, a tax system is more efficient if the tax base is as broad as possible and the tax rates as low as possible. If there are exemptions and special treatments that narrow the tax base, then it is necessary to increase the tax rate on those remaining in the tax base in order to raise the same revenue. Second, an income tax with exemptions and special treatments violates the commonly invoked principles of horizontal and vertical equity. The principle of horizontal equity requires that those with similar incomes, irrespective of source, should face similar tax burdens. If someone receives income from an exempt source, like capital gains in the Jamaican context, then they pay less tax than someone who receives the same sum exclusively from wages, rent, or interest.

For example, consider the case of two people with the same income. One receives J\$200,000 from realized capital gains, and the other makes J\$200,000 in wages. The one with income from capital gains pays no income tax in Jamaica, but the person with J\$200,000 exclusively from wages must pay J\$19,892 in income taxes alone (this calculation does not account for payroll taxes). In this example, two people with the exact same income face very different tax burdens; thus, violating the principle of horizontal equity.

The principle of vertical equity requires that those with greater incomes, or ability to pay, should pay more tax. For example, a person who receives J\$10 million in realized capital gains would pay no income tax in Jamaica, but someone making J\$200,000 would, as before, pay J\$19,892 in income tax alone. In this example, the person making J\$10 million does not pay as much tax as the person making J\$200,000. This pattern of tax burdens violates the principle of vertical equity.

Third, exempt sources of income create tax rate differentials. As discussed above, tax differentials among sources of income induce income shifting, and other behaviors that reduce the revenue yield of the tax system as well as distorting business decisions. Finally, exempt source of income and other tax preferences may unduly complicate the administration of and compliance with the tax system.

A fundamental feature of the *Jamaica Income Tax Act* is that income from the conduct of a trade or business, or *revenue expenditure* in the language of the *Act*, is taxable, but receipts from the disposal of capital assets or capital gains are not. As previously discussed, capital gains should be included in the tax base, at least according to Haig-Simon's comprehensive definition of income. The exemption of realized capital gains from income tax and other investment incentives, such as tax holidays, are the most prominent problems with the current definition of the income tax base in the *Jamaica Income Tax Act*. These exemptions create arbitrary tax burdens, steer investment to tax preferred activities (e.g., hotels, export industries, etc.) that absent the tax preference may not yield the highest pre-tax rates of return, and may complicate administration of and compliance with the tax system.

Interest payments

Interest paid on funds borrowed for the purpose of earning income is tax deductible for the year in which payment is actually made. A company paying interest to a nonresident creditor is supposed to satisfy the Commissioner that any tax due thereon has been withheld by the company and paid to the government before the company is allowed to claim the payment as a deduction. Payments to a foreign affiliate must be on an arm's-length basis. Neither of these requirements is being monitored effectively by the Tax Audit and Assessment Department (TAAD).

A dividend payable on preferred shares is treated as interest if: (a) in the case of a closely held company, the preference capital does not exceed 50 percent of the remaining paid up capital and (b) the dividend is not paid at a rate higher than the Commissioner considers to be a reasonable commercial rate at the time of the issue of the capital. The first of these provisions discourages companies from becoming too thinly capitalized. In general, preference dividends of publicly owned companies are fully deductible.

Inventory valuation

For tax purposes inventory is valued at the lower of cost or market value. Upon liquidation, inventory must be valued at the current market price if it is sold on the open market. If the inventory is sold to another trader, however, the value is taken to be the amount realized and the purchaser may claim the cost as an expense. Jamaican firms are required to employ the first-in-first-out (FIFO) method for determining their cost of sales.

The FIFO method of accounting leads to an overstatement of profits during an inflationary period because the cost of sales is computed assuming that the item sold are those acquired earliest, when prices were lower. An alternative means of correcting for

inflation-induced increases in chargeable income would be to officially allow companies to adopt last-in-first-out (LIFO) basis of valuation for tax purposes. The size of the revenue loss associated with the official sanctioning of LIFO accounting would increase with the number and the sizes of firms that switched over to this accounting method.

There are a number of factors that may dissuade company managers from adopting LIFO even if *The Income Tax Act* were amended to permit it. First, LIFO accounting entails complicated adjustments that may be beyond the bookkeeping capacity of most small firms. Second, the net profits reported in a company's financial statements would be lower, everything else held constant, if the company valued the cost of goods it sold on a LIFO basis than if it had computed this cost on a FIFO basis. Although there would be no change in the real profitability of the company, managers may be concerned that a fall in reported profits associated with the change in accounting methods would lower the value of their companies' shares. The managers would more likely be concerned with the effect of a fall in profits on their access to bank credit or on their personal benefits under management bonus and commission schemes. Finally, this change in accounting methods would reduce reported corporate profits and thereby reduce the perceived ability of the company to distribute profits to its shareholders. These concerns are founded on the questionable assumption that neither banks nor company owners would adjust their evaluations of a company's performance for the change in accounting methods.

Employee remuneration

Remuneration paid to employees is deductible in full, provided that such payments are commensurate with services rendered. A company's profits tax liability

does not change when the manner in which the company remunerates its employees (e.g., paying allowances rather than wages) changes; all forms of remuneration or expense reimbursements are deductible from the chargeable income of the company.

Deduction of taxes

Jamaican income tax or United Kingdom or Commonwealth Income Tax are not allowable deductions, being in effect a distribution of profit and not an expense incurred in earning profit.

Other taxes and levies which are not allowable include:

- i.) Death Duties;
- ii.) Foreign and Commonwealth Tax for which Double Taxation Relief has been given;
- iii.) GCT, except in special cases;⁶ and
- iv.) Transfer Tax.

Allowable taxes and levies include:

- i.) Land Tax;
- ii.) Employer share of payroll taxes (the employee's share is included in the employee's gross wages, which can be fully deducted from the employer's chargeable income);
- iii.) Import Tax; and
- iv.) Foreign and Commonwealth Tax for which no Double Tax Relief has been given.
- v.) Stamp Duties are allowable deductions in certain cases (not in the case of the transfer of capital goods).

The amount of the foreign or commonwealth tax to be allowed is strictly the amount paid in respect of the foreign or commonwealth assessments for the period covered by the accounts. The admissibility of Stamp Duties depends on the usual

⁶ GCT claimed as an input tax cannot be treated as a deduction for income tax. However, if the taxpayer is in an exempt activity he can claim the GCT as a deduction and in cases where only a portion is allowed under the GCT Act the balance can be claimed as expense. The basic rule of revenue vs. capital expenditure must be considered before allowing the GCT portion of expenditure as a deduction for income tax.

principle; whether the money is laid out for the purposes of the trade; and whether it is in connection with revenue or capital matters. Transfer tax paid on the sale of assets which form part of the trading stock of a taxpayer is set against income tax payable in the profits of gains of the trade which arise after the sale of the assets in question.

The limitations on the deductibility of taxes, especially in the case of stamp duties and transfer taxes, seems to be a sensible extension of the limitations of deductions to those “wholly and exclusively” incurred in acquiring income from revenue expenditure, and the prohibition of deducting expenditures incurred in acquiring income from capital assets, which is exempt from tax.

Donations

Donations, up to a limit of 5 percent of the donor’s statutory income, are deductible when made to any institution or organization established and operated exclusively for charitable or educational purposes and approved by the Ministry of Finance. As previously noted many countries allow corporations and individuals to deduct contributions to recognized charities from chargeable income, subject to some limitation like the 5 percent limitation in the Jamaican context.

Other payments

Royalties, insurance premiums, management fees and employee remuneration are all fully deductible if they meet the general condition that they have been incurred wholly and exclusively in the course of acquiring chargeable income.

An exception to this generalization is the case of management expenses incurred in the acquisition of investment income. These expenses are deductible only up to a limit

of one-tenth of that investment income. Given the general principal in *The Income Tax Act* that capital expenditures are not deductible because capital gains are not taxable, it is difficult to rationalize permitting a deduction for management fees for investment income. Furthermore, if an investment portfolio results in losses, the ten percent limitation means that there is no allowable deduction when, presumably, expert investment management is needed most.

There are no additional restrictions or special limits on the amount of any of these payments which are made to foreign individuals or companies. The tax that must be withheld from any of these payments overseas is determined by individual tax treaties.

Losses

A loss is deductible if, had it been a profit, it would have been taxable. In other words, a company always adjusts its book profits (or losses) to comply with the legal definition of chargeable income and if the resulting amount happens to be negative, it represents a deductible loss. Losses that satisfy this condition may be carried forward, in their entirety, against taxable income. *The Income Tax Act* does not permit companies to carry back losses. It is rather unusual to allow firms to carry forward losses indefinitely. Indefinite loss carry forwards erode the revenue yield of the income tax and create a burden on the tax administration to maintain records on the stock of losses. Indefinite loss carry forwards also increases the incentives to engage in riskier investments because the government will be bearing part of the risk as well as increasing the incentives to under report income and exaggerate deductions in order to create losses to offset against future income for tax purposes. Typically, countries grant a limited ability to carry forward and carry back losses, of 3 to 5 years. The granting of limited loss carry backs would not

result in a substantial revenue loss, nor would it provide much relief for unsuccessful businesses because they must have profits within the loss carry back period in order to offset losses. The revenue loss from granting a limited ability to carry back losses would be partially or, perhaps, fully offset by limiting to a like number of years the ability of company's to carry forward losses.

Losses which are incurred during a tax holiday period, and which are not written off therein, are exceptions to the two rules just given. A company relieved under any of the country's incentive laws may carry forward losses incurred during its holiday period five years after the expiration of that period. Companies relieved under the Hotels Incentives, Resort and Cottages Incentives, or Shipping Incentives Acts may factor annual allowances into the calculation of such losses. Companies relieved under the Industrial Incentives or Export Industry Encouragement Acts cannot take these allowances into account.

The tax returns of most companies have been given scant attention by the Tax Administration and Audit Department. In fact, only about 5 percent of all company tax returns were audited in 2003-04. Further, the returns of companies benefiting from tax holidays receive very little attention. Even though the current tax liabilities of many of these companies benefiting from a tax holiday will be zero, some of them may attempt to reduce their future liabilities by generating artificial losses to carry forward after their holidays end. For this reason, the returns of tax-relieved companies need to be more closely monitored during their tax holidays.

The Commissioner may deny a claim for carry forward of losses by a company if within any three-year period there is both a change in control of the company and a major

change in the nature or conduct of the business; or, if at any time after the trade or business become negligible and before any considerable revival of it, there is a change in control of the company. This provision is an impediment to the sale of a business with tax losses. Prospective buyers will be uncertain as to whether the Commissioner will permit them to utilize the tax losses and this uncertainty will make it difficult for them to arrive at offer prices for purchases.

Affiliated companies are not allowed to file consolidated tax returns, so a tax sustained by one member of a group cannot be offset against the chargeable income of another member of the group. This restriction may result in profit-shifting among affiliated companies. The detection of transfer-pricing and other profit-shifting mechanisms is a difficult task. Although this form of tax avoidance largely substitutes for a group loss provision, companies are forced to practice creative bookkeeping in order to gain this advantage. This practice deprives investors of accurate information and if companies find that they can circumvent this provision of the tax code, they may attempt other forms of tax evasion. On the other hand, if group relief was really a major concern to a parent company, it would have set up its various operations as divisions rather than subsidiaries.

A Brief Review of Major Behavioral Effects of Jamaica's CIT

Below is a brief review of major behavioral effects of Jamaica's CIT, specifically income shifting due to tax differentials by source of income, the effect of the CIT on the user cost of capital, dividend policy due to the double taxation of dividends, and debt versus equity finance due to the taxation of dividends and deductibility of interest expense.

Income shifting

As discussed above, the statutory tax rate on corporate profits is greater than the income tax rate on wages and salary. However, this is not the whole story; it is also necessary to take into account the effect of payroll taxes as well as the double taxation of dividends.

Before proceeding with this analysis, however, it is important to understand that the economic incidence of a tax does not depend on the point of collection. Rather, the economic incidence of a tax depends, in technical terms, upon the relative elasticities of supply and demand. It may be helpful to illustrate this technical point with a concrete example. Suppose that hourly workers put in 40 hours per week irrespective of their after-tax hourly wage. In technical terms, labor supply is perfectly inelastic. Under this extreme assumption, companies would be able to shift the employer share of payroll taxes onto their employees by lowering the pre-tax hourly wage in the amount of the payroll tax.⁷

By assumption, employees would not respond to this change in their after-tax hourly wage. Alternatively, suppose that hourly workers are able and willing to change the number of hours that they work per week. In this case, the ability of companies to shift the employer share of payroll taxes onto their employees by reducing pre-tax hourly wages would be limited by their employees' willingness to reduce the number of hours of work in response to a decrease in their after-tax hourly wage and their willingness to migrate to the untaxed, informal sector.

⁷ In Jamaica, the employer share of payroll taxes in the private sector is 11.5 percent.

Economists generally believe that hourly workers bear the burden of both the employee and employer's share of payroll taxes. This assumption is particularly compelling in many cases because full-time hourly workers often do not have the ability to choose the number of hours that they work. Furthermore, workers may not find employment in the untaxed, informal sector as a good substitute for employment in the formal sector, because there may be greater job security and non-wage benefits from employment in formal sector. Therefore, we will assume that employees bear the full burden of both the employee and employer's share of the payroll taxes. With this understanding in hand, we now return to the topic at hand: income shifting in response to tax rate differentials.

An owner-manager of a company is often in the fortunate position of being able to exercise some discretion over the form in which they take income out of their company. For example, they may be able to take compensation and/or profit out of the company as salary, dividends, or capital gains. Alternatively, owner-managers can elect to re-invest company profits in plant and equipment, research and development, advertising, etc. Such decisions have important implications for economic growth and government tax receipts, and there is considerable evidence that such decisions are influenced by tax rate differentials and, as we will show, depreciation rules.

Table 5 provides a summary of tax differentials by source of income. We wish to describe the tax incentives facing owner-managers. The marginal tax rates in Table 5 are constructed with this goal in mind. Based on the information provided in Table 1, the total tax rate on wages in the private sector for someone making less than JS\$120,432 is

17.5 percent.⁸ However, payroll taxes can be deducted from the chargeable income of the company, so the effective marginal tax rate on the salary of an owner-manager making less than J\$120,432 is 11.73 percent, or $11.73 = 17.5 \cdot (1 - 0.333)$, as shown in Table 5. Along the same lines, the marginal tax rate on wages and salary for an owner-manager making more than J\$120,432 but less than J\$500,000 is 42.5 percent, and the marginal tax rate for one making more than J\$500,000 is 38.0 percent.⁹ However, if we account for the deductibility of these taxes from the company's chargeable income, then the marginal tax rates, as shown in Table 5, are 28.35 [= $0.425 \cdot (1 - 0.333)$] and 24.35 [= $0.38 \cdot (1 - 0.333)$] percent, respectively.

⁸ For employees making less than J\$120,432, the effective marginal tax rate on wages and emoluments (MTR_Y) is calculated as follows: $MTR_Y = MTR_{ET} \cdot (1 - MTR_{NIS}) + MTR_{NIS} + MTR_{NHT} \cdot (1 - MTR_{NIS}) + MTR_{HEART} = 0.05 \cdot (1 - 0.05) + 0.05 + 0.05 \cdot (1 - 0.05) + 0.03 = 0.175$, where the subscripts stand for Education Tax (ET), NIS, NHT, and HEART contributions, respectively.

⁹ For an employee making more than J\$120,432 but less than J\$500,000, the marginal tax rate on wages and emoluments (MTR_Y) is calculated as follows: $MTR_Y = MTR_{PAYE} + MTR_{ET} \cdot (1 - MTR_{NIS}) + MTR_{NIS} + MTR_{NHT} \cdot (1 - MTR_{NIS}) + MTR_{HEART} = 0.25 + 0.05 \cdot (1 - 0.05) + 0.05 + 0.05 \cdot (1 - 0.05) + 0.03 = 0.425$ where the subscripts stand for P.A.Y.E., Education Tax (ET), NIS, NHT, and HEART contributions, respectively. For an employee making more than J\$500,000, the marginal tax rate on wages and emoluments is given as follows: $MTR_Y = (MTR_{PAYE} + MTR_{ET} + MTR_{NIS} + MTR_{NHT} + MTR_{HEART}) = 0.25 + 0.05 + 0.05 + 0.03 = 0.38$. The difference between these two figures reflects the fact that the NIS contribution does not apply to wages and emoluments in excess of J\$500,000.

Table 5: Marginal Tax Rates (MTR) on Income by Source

Income (in J\$)	MTR on wages ¹ (in percent)	MTR on dividends (unlisted) ² (in percent)	MTR on dividends (listed) ³ (in percent)	MTR on incentive income ⁴ (in percent)	MTR on sales of capital assets ⁵ (in percent)
Less than 120,432.25	11.67	50.25	25	0	7.5
120,432.25 to 500,000	28.35	50.25	25	0	7.5
Greater than 500,000	24.35	50.25	25	0	7.5

¹ This calculation accounts for the ability of companies to deduct all payroll taxes, including P.A.Y.E., from the company's chargeable income. Further, it assumes that the company's payroll is greater than J\$14,444.

² This calculation assumes that dividends paid by companies that are not listed on a recognized stock exchange are subject to company and personal income tax.

³ This calculation assumes that dividends paid by companies that are listed on a recognized stock exchange are not subject to company.

⁴ This calculation assumes that incentive income is not subject to company income tax or personal income tax.

⁵ While there is no tax on capital gains in Jamaica, there is a 7.5 percent transactions tax on capital distributions and the sell of securities. Since the transactions tax does not allow the seller to deduct the purchase price from the sells price of the asset (security), it is not strictly speaking a capital gains tax.

In order to illustrate the incentives that such tax differentials create consider the following example. Suppose an unlisted company has pre-tax profits of J\$100. Suppose further than Ms. Gordon – the sole owner and manager of this company – is contemplating the tax consequences of alternative ways of taking this sum out of the company. She has a number of options, including raising her salary or paying herself a dividend. Suppose she elects to raise her salary; then, the firm would be obliged to withhold J\$38 from the J\$100, or $J\$100 \times 0.38$ (assuming her base salary is greater than J\$500,000) in order to pay her individual income tax liability and the employee and employer's shares of the associated payroll taxes on the additional J\$100 of wages. However, these taxes are deductible from the company's chargeable income, so long as it is profitable, which would reduce the company's tax liability by J\$12.654. Accounting

for the deductibility of wage and emoluments, including individual tax withheld and the employee and employer's shares of payroll taxes, then her company can pay her J\$74.654 out of the original J\$100, or $J\$100 \times [1 - 0.38 \times (1 - 0.333)]$.

If, on the other hand, Ms. Gordon elects to take the J\$100 out of her company as a dividend, then the company must pay company tax of J\$33 on this dividend because dividends are not generally deductible from chargeable income, except in the case of dividends paid by firms listed on recognized stock exchanges. In addition, the company would be obliged to withhold individual tax of J\$16.675 [= $J\$100 \times (1 - 0.333) \times 0.25$]. If she elects to take the J\$100 out of the company by paying herself a dividend, then her after-tax income would be only J\$50.025, or $J\$100 \times (1 - 0.333) \times (1 - 0.25)$. In other words, there is a 49.23 percent (= $J\$74.654 \div J\$50.025 - 1$) increase in her after-tax income, if she elects to take income out of the company as wages rather than dividends. All other things held constant, the tax incentives clearly encourage her to take pre-tax profits out of the company through wage payments rather as dividends.

Now, we turn to a discussion of how the corporate income tax affects the incentives facing firms to invest in plant and equipment.

User cost of capital

The tax treatment of retained earnings, dividends, capital gains, interest payments, and capital allowances influence the incentives facing companies to invest in plant and equipment. A key variable in the firm's investment decision is the user cost of capital. The user cost of capital includes both the opportunity cost of forgoing other investments and direct costs such as depreciation and taxes. The user cost of capital indicates the rate of return a project must attain to be profitable. For example, if the user cost of capital on

a project is 15 percent, a firm undertakes the project only if its rate of return exceeds 15 percent.

To make this concept more concrete, consider the following example. Suppose Mr. Lai can always lend his money and receive an after-tax rate of return of 10 percent. Mr. Lai is the sole shareholder of a corporation that owns and operates a factory. Since he can always earn 10 percent simply by lending in the capital market, he will not make any investment in the factory that yields less than that amount.¹⁰ Assume that Mr. Lai is considering the acquisition of a drill press that would experience economic depreciation of 2 percent annually. Here, economic depreciation represents the actual cost of wear and tear on the piece of equipment, which is known to Mr. Lai with certainty in advance. Ignoring taxes for the moment, the user cost of capital for the drill press would be 12 percent because the drill press would have to generate a 12 percent rate of return to earn Mr. Lai the 10 percent return that he could receive by simply lending his money. Algebraically, if r is the after-tax rate of return and d is the economic rate of depreciation, the user cost of capital is $(r + d)$ after taxes. If the drill press cannot earn $(r + d)$ (or 12 percent) after tax, there is no reason for the firm to purchase it.

Now assume that the corporate tax rate is 0.333, Mr. Lai's marginal personal income tax rate is 25 percent, and all of the corporation's earnings are distributed as dividends subject to double taxation. If the corporation earns J\$100, a corporation tax of J\$33.3 ($= 0.333 \times \text{J\$}100$) is due, leaving J\$66.7 available to distribute to Mr. Lai. In addition, the company must withhold individual tax at a rate of 25 percent, leading to a

¹⁰ This example also illustrates the so-called crowding out effect of government debt. If the government is borrowing significant amount of funds and paying a high rate of interest, then people may prefer to lend to the government than invest in plant and equipment.

tax liability of J\$16.7, which leaves him with J\$50. Algebraically, if Θ is the corporate tax rate and t is the individual tax rate, the after-tax return from J\$1 of corporate profits is $(1 - \Theta) \times (1 - t)$.

How do these taxes affect the cost of capital? Calling the user cost of capital C , then C must be a solution to the equation $(1 - 0.333) \times (1 - 0.25) \times C = 12$ percent, or $C = 0.23988$. Thus, Mr. Lai is unwilling to purchase the drill press unless its before-tax return is approximately 24 percent or greater. Using our algebraic notation, the user cost of capital is the value of C that solves the equation $(1 - \Theta) \times (1 - t) \times C = (r + d)$, or

$$C = \frac{(r + d)}{(1 - \Theta) \times (1 - t)}.^{11}$$

So far, we have shown how corporate and individual tax rates increase the user cost of capital. However, other provisions in the tax code such as initial and annual allowances, accelerated depreciation, and special investment allowances lower the cost of capital. Suppose the present value of depreciation allowances is J\$64.¹² In effect, then, depreciation allowances reduce the cost of acquiring the drill press by 64 percent. In our example, instead of having to return approximately 24 percent, the drill press now only has to return 8.64 percent [= $0.24 \times (1 - 0.64)$]. Algebraically, depreciation allowances lower the cost of capital by a factor of $(1 - A)$, where A is the present value of the capital allowances.

In summary, tax differentials in the treatment of income by source create incentives for income shifting. Income shifting may compromise the revenue yield,

¹¹ See Harvey S. Rosen, *Public Finance*, 7th edition, New York: McGraw-Hill, 2002, p. 407.

¹² For purposes of this calculation, we assume that the residual value of the asset after ten years is zero, and the asset is depreciated over ten years, the initial allowance is 20 percent, the annual allowance is 10 percent, and the rate of interest is 10 percent. These calculations are discussed in greater detail below.

efficiency, and equity of the tax system. In particular, the tax treatment of corporate profits and dividends increase the user cost of capital, and capital allowances reduce the user cost.

Effect of taxes on dividend policy

Profits earned by a corporation may be either distributed to shareholders in the form of dividends or retained by the company. If we assume that outcomes of all investments are known in advance with certainty, and there are no taxes, then the owners of a firm are indifferent between a dollar of dividends and a dollar of retained earnings. Provided that the stock market accurately reflects the firm's value, J\$100 of retained earnings increases the value of the firm's stock by J\$100. This J\$100 capital gain is as much income as a J\$100 dividend receipt. Under the previous assumptions and ignoring for the moment the role of risk, then, stockholders do not care whether profits are distributed.

Of course, in reality, considerable uncertainty surrounds the outcomes of economic decisions, and corporate income is subject to a variety of taxes. As already noted, when dividends are paid out, the shareholder incurs an individual tax liability, while retained earnings generate no concurrent tax liability. True, the retention creates a capital gain for the shareholder, but capital gains are not taxed in Jamaica.

Since the tax system appears to bias firms against paying dividends (although it by no means discourages them altogether), the natural question is how corporate financial policy would change, absent the bias against paying dividends, with respect to retained earnings. Suppose that for whatever reasons, firms want to pay some dividends as well as retain earnings. One factor that determines the desired amount of retained earnings is the

opportunity cost in terms of after-tax dividends paid to shareholders. For example, if there were no taxes, the opportunity cost of J\$100 of retained earnings would be J\$100 of dividends. On the other hand, if the stockholder faces a 25 percent marginal income tax rate, the opportunity cost of retaining J\$100 in the firm is only J\$75 of dividends. In effect, then, the current tax system lowers the opportunity cost of retained earnings.

Several studies of U.S. companies have found that when the opportunity cost of retained earnings decreases, dividend payments go down.¹³ Some argue that this is desirable because increasing retained earnings makes more money available for investment. However, it is not clear that retained earnings represent net new savings. While it is true that retained earnings represent savings, it may be that shareholders recognize that corporations are saving on their behalf when it retains earnings rather than paying a dividend. In that case, shareholders may simply reduce their personal savings by that amount. Thus, the composition of overall savings has changed; but, its total amount is just the same as before the retention.

Debt versus equity finance

Another important financial decision for corporations is how to raise money. The firm has basically two options. It can borrow money (issue debt), or it can issue shares of stock (equity). The firm must pay interest on its debt, but the inability to meet the interest payments or repay the principal may have serious consequences. In the case of equity finance, and ignoring for the moment the effect of taxes on dividend policy, the

¹³ For an excellent review of the evidence see U.S. Department of the Treasury. *Integration of the Individual and Corporate Tax Systems*. Washington, D.C.: U.S. Government Printing Office, 1992.

shareholder may receive dividends from their shares or, in the case of retained earnings, see their shares grow in value.

Under the *Jamaican Income Tax Act*, corporations are permitted to deduct payments of interest from chargeable income, but they are not allowed to deduct dividends, at least in the case of unlisted firms or income subject to a tax holiday. Jamaica's tax law, as in many countries, therefore builds in a bias in favor of debt financing exclusively. The question then becomes: why do firms continue to use equity finance and pay dividends, despite the tax incentives to do otherwise. Part of the answer lies in the uncertainty of the environments in which firms operate. There is always some possibility of a very bad outcome and bankruptcy. The more a firm borrows, the higher its debt payments, and the greater the probability of bankruptcy, other things being the same. It can be argued that by encouraging the use of debt, the tax system has the undesirable effect of increasing the probabilities of bankruptcy above levels that otherwise would prevail.

Performance of Jamaica's CIT

There are a number of criteria that are commonly used to evaluate a tax system. For example, public finance economists often judge a tax against a number of normative criteria, like those applied above, namely efficiency, equity (horizontal and vertical), and costs of administration and compliance. However, one of the most important criteria for evaluating a tax is revenue performance. After all, the primary purpose of a tax is to raise revenue for public purposes.

Table 6 shows the evolution of GDP, profits, total tax revenue, and corporate income tax receipts (CIT) over the period 1993 to 2002.¹⁴ Generally, the nominal values of these series, in the upper panel of Table 6, are trending upward over time due, at least in part, to the effect of inflation. In the lower panel of Table 6 are the ratios of these series, which removes the effect of changes in the price level as well as revealing relationships among these series.

From row 9 of Table 6, we see that corporate tax receipts are an important but decreasing share of total tax receipts. In 2002, the share of CIT in total tax revenue is approximately 6.9 percent, having fallen from 12.7 percent in 1993. Although OECD countries generally collect about 10 percent of tax revenues from corporate taxes, the downward trending share exhibited by this series in Jamaica is generally consistent with international experience. In fact, this share may be greater than expected given the large number of tax incentives and administrative weaknesses. On the other hand, row 5 shows that total tax receipts are increasing as a share of GDP, having grown from 25.6 percent in 1993 to 27 percent in 2002.

¹⁴ These are the most recent data currently available. GDP figures are not yet available.

Table 6: Trends among Important Macroeconomic Indicators, for 1993 to 2002

(in millions of J\$)

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1. GDP	113,054.3	150,856.1	188,827.5	224,520.3	245,395.5	262,854.0	281,190.4	316,581.2	348,877.2	381,074.3
2. Profit	45,403.2	64,043.3	68,835.2	77,197.6	85,146.3	86,606.3	87,053.4	101,894.2	115,839.9	126,761.3
3. Total Tax Revenue	28,948	38,071	50,261	55,191	59,224	66,970	75,962	87,074	90,568	102,859
4. Corporate Profit Tax	3,687	5,457	6,040	6,189	5,830	5,695	6,972	7,197	5,986	7,122
5. Total Tax Rev ÷ GDP (in percent)	25.6	25.2	26.6	24.6	24.1	25.5	27.0	27.5	26.0	27.0
6. Profit Tax ÷ GDP (in percent)	3.3	3.6	3.2	2.8	2.4	2.2	2.5	2.3	1.7	1.9
7. Profit ÷ GDP (in percent)	40.2	42.5	36.5	34.4	34.7	33.0	31.0	32.3	33.2	33.2
8. Profit Tax ÷ Profit (in percent)	8.1	8.5	8.8	8.0	6.9	6.6	8.0	7.1	5.2	5.6
9. Profit Tax ÷ Total Tax (in percent)	12.7	14.3	12.0	11.2	9.8	8.5	9.2	8.3	6.6	6.9

Sources: National Income and Product 2002, The Statistical Institute of Jamaica, Ministry of Finance, and own calculations.

Since National Income and Product Accounts are reported on a calendar year basis, and tax receipts are reported on a fiscal year basis, fiscal year 1993/94 is matched to calendar year 1993. Here, profit corresponds to operating surplus in the National Income and Product Accounts.

Importantly, we can gain some initial insights into the relationship between corporate tax receipts and GDP from the series in row 6 of Table 6: the ratio of corporate tax receipts and GDP. This ratio has been declining during this period, from 3.3 percent in 1993 to 1.9 percent in 2002. Table 6 also shows that profits are declining as a share of GDP (row 7), and corporate tax receipts are declining as a share of profits (row 8).

These relationships are suggestive. If corporate tax receipts are a declining share of the tax base (profits), and the tax base is a declining share of GDP, then it follows by the imperatives of arithmetic that corporate tax receipts must decline relative to GDP. These relationships can be expanded as follows:

$$\frac{\text{CIT}}{\text{GDP}} = \frac{\text{CIT}}{\text{Reported Profits}} \times \frac{\text{Reported Profits}}{\text{Chargeable Profits}} \times \frac{\text{Chargeable Profits}}{\text{Profits}} \times \frac{\text{Profits}}{\text{GDP}} \quad (1)$$

This identity says that the corporate tax receipts (CIT) to GDP ratio is equal to the product of four factors: (1) the corporate tax rate, (2) the rate of voluntary reporting compliance, (3) the coverage rate of chargeable profits with respect to total profits, and (4) the share of total profits in GDP. This identity can shed additional insight into the determinants of the decline in corporate tax receipts as a share of GDP.

Since the corporate tax rate is constant and equal to 33 1/3rd percent during this period, it clearly cannot provide an explanation of the decline of corporate tax receipts as a share of GDP. From the evidence in Table 6, we know that total profits are declining as a share of GDP. However, this is not a complete explanation of the decline in the CIT-to-GDP ratio. The voluntary reporting compliance and coverage rates also have played an important role.

We can re-arrange (1) above to obtain the following expression:

$$\left(\frac{\text{Reported Profits}}{\text{Chargeable Income}} \right) \times \left(\frac{\text{Chargeable Income}}{\text{Profits}} \right) = \frac{\left(\frac{\text{CIT}}{\text{GDP}} \right)}{(0.333) \times \left(\frac{\text{Profit}}{\text{GDP}} \right)}. \quad (2)$$

Since we cannot observe chargeable income, we cannot compute the terms on the left-hand-side of (2). However, we can use information from Table 6 to estimate their product, henceforth referred to as the product of the compliance-coverage rates.

Specifically, we know from Table 6 that the CIT-to-GDP ratio was equal to 1.9 percent in 2002, and the corresponding profit-to-GDP ratio was 33.2 percent. By substituting these values into expression (2), we find that the product of the compliance-coverage rates is equal to 17 percent. This implies that either the rate of voluntary reporting compliance is very low, or the coverage rate is very low, or some combination of the two. Either way, it appears that only about 17 percent of profits are reported for tax purposes. Suppose, for example, that the coverage rate is estimated to equal 80 percent; then expression (2) implies that the compliance rate is equal to 0.21 percent ($0.17 = 0.80 \times 0.21$). Depending upon the share of income subject to tax holidays, this estimate of the coverage may be somewhat optimistic and the compliance rate unduly pessimistic. Suppose, instead, that the coverage rate is 40 percent, this implies that the compliance rate is approximately 40 percent. In either case, the compliance rate is quite low.

Expression (2) and the data also imply that the decline in corporate tax receipts as a share of GDP is due to a declining rate of voluntary compliance and/or a declining rate of tax base coverage. Table 7 reports the product of the compliance-coverage rates for the period 1993 to 2002. This product has been declining over time, from 24.6 percent in 1993 to 17.0 percent in 2002. In addition, this series exhibits several abrupt and

significant declines: (1) a 16 percent decline between 1996 and 1997 (from 24.2 to 20.8 percent) and (2) a 36 percent decline between 2000 and 2001 (from 21.4 to 15.7 percent). There is also an upward spike from 19.9 percent in 1998 to 24.3 in 1999; then, it returns to the previous level in the subsequent years and continues to decline.

Table 7: Trend in Reporting Compliance × Coverage Rates
(in percent)

Year	(Compliance Rate)×(Coverage Rate)
1993	24.6
1994	25.8
1995	26.6
1996	24.2
1997	20.8
1998	19.9
1999	24.3
2000	21.4
2001	15.7
2002	17.0

Since the corporate tax rate is unchanged and the definition of statutory income is little changed, the trend in the compliance-coverage rates reflects either a decline in voluntary reporting compliance or a change in the composition of profits, away from taxable activities. A decline in voluntary reporting compliance must reflect a complicated interaction among declining enforcement effort, increased evasion opportunities, and/or a weakening business environment. Similarly, a decline in the coverage rate, absent a change in the definition of statutory income, may reflect a shift of income into tax exempt activities and/or a relative decline in the profitability of taxable activities. Therefore, tax policy and administration should be aimed at remedying these problems. By simply repealing targeted tax incentives – tax holidays – the coverage rate would increase. As will be discussed below, tax enforcement can be significantly strengthened as well.

The revenue growth of a tax can be judged by its income elasticity. The income elasticity of a tax is a measure of the percent change in tax receipts induced by a percent change in income; Gross Domestic Product (GDP) is commonly used as a proxy for income. Using the data in Table 6, we estimate this elasticity by regressing the natural log of corporate tax receipts on the natural log of GDP and a constant. The resulting estimate of the elasticity is 0.42 and is statistically significant (the p-value is 0.002).¹⁵ This estimate implies that a 1 percent increase in GDP would result in a 0.42 percent increase in corporate tax receipts. This is indicative of a very weak relationship between economic growth and corporate tax receipts.

Generally speaking, a thriving business sector and the resulting strong economic growth would imply strong growth in corporate profits and buoyant corporate tax receipts. Assuming the reporting compliance rate, coverage rate, and corporate tax rate are relatively stable, then growing corporate profits would imply an income elasticity of corporate tax receipts that is much closer to unity, if not greater than 1.0. Such a low estimate reflects some combination of an increase in illegal tax evasion – a decline in voluntary reporting compliance – and an increase in legal tax avoidance – a shift out of taxable activities by the corporate sector.

In summary, the performance of the corporate tax is weak and becoming weaker with time. The recent trends regarding the declining performance of the corporate tax in Jamaica are generally consistent with international experience. However, the low income elasticity of corporate tax receipts (0.42) and the low compliance-coverage rate (17.0

¹⁵ The R^2 of this regression is equal to 0.84, meaning that changes in GDP explain approximately 84 percent of the variation in corporate tax receipts. While such a high R^2 is not unusual with time series data, like those in Table 6, it suggests that the regression explains or fits the data rather well.

percent) are cause for concern. In fact, they call for remedial actions. Eliminating targeted investment incentives and strengthening the administration of the corporate tax would be options. A low coverage rate is a consequence of a narrow corporate tax base due to the proliferation of corporate tax holidays for various types of investments. Similarly, a decline in voluntary reporting compliance by the corporate sector is consistent with weak enforcement effort and pressures on the corporate sector due to weak demand and high costs of energy and borrowing.

Administration of Jamaica's CIT

In the previous section, we reported some evidence that suggests the rate of voluntary reporting compliance with the CIT may be extremely low, perhaps in the 20 to 30 percent range. Now, we turn to a discussion of the evidence on voluntary reporting compliance with the CIT. Table 8 shows the number of CIT returns (IT02) that were submitted before the filing date (see the column labeled early), and the number filed after the filing date (see the column labeled "late") as well as the total assessments associated with those returns, by tax year (TY).

Table 8 shows that in TY 1996, only 412 returns were filed "early" (before the due date of 15/03/1997), while 6,417 were filed after the due date or late. Furthermore, the total assessments and assessment per return are substantially larger for those submitted late. Table 8 shows that the total number of CIT returns has declined from 6,829 for TY 1996 to 2,825 for TY 2002. Despite the adverse trend in the total number of filings, total assessments have grown slightly from J\$5.3 billion for TY 1996 to J\$6.2 billion for TY 2002. Finally, the share of returns that were submitted before the filing date has increased from 3 percent for TY 1996 to 41 percent for TY 2002. Likewise, the

share of total assessments associated with timely filings has grown from 5 percent to 62 percent between TY 1996 and TY 2002, respectively.

Table 8: Number of Corporate Income Tax Returns and Assessments,

Tax Year	Item	Number of Filings		
		Early	Late	Total
1996	Number of Returns	412	6,417	6,829
	Total Assessment	J\$133,894,499	J\$5,174,681,905	J\$5,308,576,404
1997	Number of Returns	503	6,206	6,709
	Total Assessment	J\$1,791,512,293	J\$3,323,874,692	J\$5,115,386,984
1998	Number of Returns	516	5,870	6,386
	Total Assessment	J\$1,561,883,889	J\$4,804,107,721	J\$6,365,991,611
1999	Number of Returns	722	5,621	6,343
	Total Assessment	J\$1,633,699,385	J\$4,597,063,638	J\$6,230,763,023
2000	Number of Returns	886	4,836	5,722
	Total Assessment	J\$1,800,474,527	J\$3,093,674,337	J\$4,894,148,864
2001	Number of Returns	1,366	3,596	4,962
	Total Assessment	J\$2,861,057,721	J\$3,331,673,484	J\$6,192,731,205
2002	Number of Returns	1,753	1,072	2,825
	Total Assessment	J\$2,502,748,589	J\$3,541,893,110	J\$6,044,641,699

Source: This information is based on an extract provided by Fiscal Services.

The trends identified in Table 8 suggest that reporting compliance may be improving, at least among corporations. From Table 9, however, we only know how many returns were submitted late. We cannot tell from these data just how long after the due date late returns were submitted. In fact, corporations may delay submitting their returns in order to complete their financial statements and obtain more accurate figures. In that case, the evidence of large numbers of late filings may not be a serious problem. In fact, if corporations are making quarterly payments as required by law, then late filings may not be a problem at all in terms of cash flow into the government coffers. On the other hand, if the estimated quarterly payments of corporations are low relative to their

underlying tax liability, then late filings could be a very serious problem in terms of cash flow to the government. In order to address some of these issues, we examine the transactions data for FY 2002/03, which are reported in Table 10.

Table 9 reports the distribution by tax year of all corporate tax returns submitted during FY 2002/03. These figures paint a disturbing picture of reporting compliance. Of the 10,441 corporate tax returns submitted in FY 2002/03, 82.1 percent (8,572 returns) are for TY 2001 and before. Table 8 shows that 3,596 TY 2000 returns were submitted late, and Table 10 shows that 1,839 of these TY 2000 returns were submitted in FY 2002/03. In others, approximately 50 percent ($= 1,839 \div 3,596$) of the late filings for TY 2000 are at least a year late. The evidence suggests that a significant proportion of late returns are submitted only after a considerable period.

The distribution of filings by quarter for TY 2001 in Table 9 provides even further evidence of the delays involved in submitting returns. The filing date for TY 2001 returns is March 15, 2002. Thus, from Table 9, we see that 1,398 (28.7 percent) returns for TY 2001 were filed in the first quarter following the filing date. As previously noted, one can accept that complicated businesses may need additional time to finalize their financial statements before submitting their returns. However, 1,490 (30.4 percent) of TY 2001 were filed at least one quarter after the filing date; 1,138 returns (23.8 percent) were submitted at least two quarters after the filing date; and 819 returns (17.2 percent) were filed at least three quarters after the filing date.

Table 9: Distribution of Corporate Income Tax Returns by Tax Year

Tax Year	Apr-Jun 2002	Jul-Sep 2002	Oct-Dec 2002	Jan-Mar 2003	Total
1987	0	1	0	0	1
1988	0	0	0	0	0
1989	0	0	0	0	0
1990	0	1	1	0	2
1991	0	1	2	0	3
1992	1	2	3	1	7
1993	7	7	7	2	23
1994	14	11	8	5	43
1995	23	23	19	13	78
1996	42	52	42	39	175
1997	80	91	65	64	300
1998	140	131	102	131	504
1999	259	216	167	185	827
2000	639	491	374	335	1,839
2001	1,368	1,450	1,138	819	4,775
2002	51	74	119	1,522	1,766
2003	0	0	0	103	103
Total number of returns	2,624	2,551	2,047	3,219	10,441
Gross receipts	J\$1,575,132,702	J\$967,542,961	J\$1,246,846,026	J\$4,077,915,127	J\$7,867,436,817
Refunds	J\$80,229,757	J\$158,200,261	J\$254,832,579	J\$223,857,117	J\$717,119,714
Audit assessment	J\$970,850	J\$18,050,613	J\$18,228,014	J\$33,000	J\$37,282,477
Net receipts	J\$1,495,873,795	J\$827,393,313	J\$1,010,241,461	J\$3,854,091,010	J\$7,187,599,580
Arrears	J\$230,041,346	J\$211,000,246	J\$413,767,392	J\$517,962,582	J\$1,372,771,566
Number of returns with audit adjustments	1	5	3	1	10

Source: Author's calculations, using IT02 and CIT ledger files provided by Fiscal Services.

Table 10: Number and Sum of Math Errors on Corporate Tax Returns, by Line

	Line 9	Line 12	Line 13	Line 16	Line 25	Line 29	Line 34	Line 35	Line 37
Math Errors	Gross Operating Profit ¹	Total Expenses ²	Net Profit ³	Total Income ⁴	Total Deductions ⁵	Income Tax on Chargeable Income ⁶	Total Credits ⁷	Net Tax Payable ⁸	Tax Payable/Refundable ⁹
Positive Number	50	155	263	303	24	489	8	507	507
Sum (in millions J\$)	529.7	2,453.1	865.0	1,480.0	1,134.0	885.2	2.7	888.5	678.7
Negative Number	49	164	208	267	118	392	18	422	450
Sum (in millions J\$)	1,480.0	735.3	5,609.5	6,027.5	1,302.3	625.0	27.6	677.0	756.7

Source: Author's calculations, using IT02 file.

¹Gross Operating Profit = Gross Receipts – Cost of Goods Sold.

²Total Expenses = Business/Administration Expenses + Adjustments.

³Net Profit = Gross Operating Profit – Total Expenses.

⁴Total Income = Net Profit + Net Rental + Dividends, Interest, etc. + Sources Outside the Island + Other Income.

⁵Total Deductions = Total Capital Allowances + Losses for Previous Years + Covenanted Donations + Franked Income.

⁶Income Tax on Chargeable Income = Statutory Income after Donations × Corporate Tax Rate

⁷Total Credits = Tax Deducted Distribution Received + Double Taxation Relief + Income Tax Relief from Incentive Income + Other Credits.

⁸Net Tax Payable = Income Tax on Chargeable Income – Total Credits.

⁹Tax Payable/Refundable = Net Tax Payable – Estimated Payments.

Of particular importance to the fiscal health of the government is the pattern of payments. The lower panel of Table 9 reports gross corporate tax receipts, refunds, audit assessments, and net corporate tax receipts, for fiscal year (FY) 2002/03. Total reported corporate tax liability for all returns submitted in FY 2002/03 is J\$7,150.3 million, and total corporate tax payments received during the same period is J\$7,187.6 million. Approximately 53.6 percent of total corporate tax payments during FY 2002/03 were received during the 4th fiscal quarter (J\$3,854.1 million).¹⁶ There were only 10 audit assessments in fiscal year 2002/03. Total audit adjustments comprised only J\$37.3 thousand or 0.4 percent of net corporate tax receipts, and there were no estimated assessments, penalties, or surcharges collected in FY 2002/03. Finally, as reported in Table 9, corporate tax arrears are equal to approximately J\$1,372.8 million or 19 percent of total corporate tax receipts for 2002/03.

In addition to the problems identified above with timely filings of corporate tax returns, there is substantial evidence of form use errors as well. Table 10 shows the number of corporate tax returns with positive or negative math errors, by line item on Form IT02. For example, Gross Operating Profit (line 9 of IT02) is calculated by subtracting the Cost of Goods Sold (line 7) from Gross Receipts/Sales/Income (line 8). As we see from Table 10, there are 50 returns on which Gross Operating Profit is miscalculated in a manner that overstates the amount calculated by a computer program that verifies the arithmetic on the tax form. Table 10 also reports that 49 returns under

¹⁶ The Ministry of Finance reports corporate tax receipts in fiscal year 2002/03 to be J\$7,121.8 million (see Table 6). Based on our calculations, we obtain J\$7,187.6 million. This discrepancy suggests that we may not have completely resolved all of the issues with the data upon which our calculations are based. Nevertheless, we have made significant progress in narrowing this discrepancy, and this gives us greater confidence that we understand the data and are using it correctly.

state Gross Operating Profit. Further, the total amount of math errors on line 9 is substantial. The sum of positive math errors for line 9 is J\$529.7 million, and the sum of negative math errors of this line item is J\$1,480.0. Turning to the line item of most concern to tax administrators – Income Tax on Chargeable Income (line 29) – we see that there are 489 positive math errors and 392 negative math errors. Not only is the number of math errors on this line item more numerous than most other lines as casual examination of Table 10 shows, but the sum of these misstatements is substantial as well. Specifically, the sum of positive math errors on this line is J\$885.2, and the sum of negative math errors is J\$625.0.

One may be tempted take some comfort in the fact that the net effect of these math errors is to over state total tax liability by J\$260.2 million (= J\$885.2 – J\$625.0). However, such complacency is not warranted. As Table 10 shows Tax Payable (line 37) is understated by J\$77.9 million (= J\$678.7 - J\$756.7). Further investigation of the source of these math errors shows that some of these math errors are the result of filers entering a negative sign in subtraction items, like Total Expenses and Total Deductions.

Table 11 documents the number of negative signs entered on Form IT02, which is a form use error. For example, there are 172 negative entries on line 7 (Gross Income), which is impossible: Gross Income cannot be negative. Similarly, Gross Rent, Dividends, Sources Outside the Island, and Other Income cannot be negative, but there numerous negative entries on these line items. The computer algorithm that conducts math verification cannot handle such form use errors. For example, the instructions for line 9 state: subtract line 8 from line 7 or Gross Operating Profit equals Gross Receipts less Cost of Sales. However, if Cost of Sales is entered with a negative sign, the the algorithm

will in effect add Cost of Sales to Gross Receipts and overstate Gross Operating Profit. Furthermore, Adjustments (line 11) can be either positive or negative. A computer algorithm simply cannot deal with such ambiguity.

By carefully scrutinizing the data, it is possible to resolve many but certainly not all of these anomalies. But, this is not the point. The math verification computer algorithm is designed to identify anomalies like those documented in Table 11 and automatically issue an assessment letter. Math error verification and the issuance of an assessment letter are used in many countries. It is an inexpensive and effective way to deal with form use and math errors quickly and efficiently. However, this cannot be done in Jamaica because the tax administration understands that some of anomalies identified by the math verification routine are the result of form use errors. For example, minus signs on subtraction line items are recorded in the data base and give rise to false math errors.

Table 11: Evidence of Corporate Income Tax Form Use Errors

Line Item	Number entered with negative sign
Gross Receipt (line 7)	172
Cost of Sales (line 8)	13
Business Expenses (line 10)	23
Adjustment (line 11)	266
Gross Rent (line 14)	1
Rental Expenses (line 15)	2
Dividend, Interest, Inv, Annuities and Discount (line 17)	19
Sources Outside the Island (line 18)	19
Other Income (line 19)	49
Total Capital Allowances (line 21)	86
Losses from previous year (line 22)	101
Covenanted Donations (line 23)	7
Franked Income (line 24)	4
Double Taxation Relief (line 30)	4
Income Tax Relief (line 32)	1
Other Credit (line 33)	3

Source: Author's calculations using the IT02 file.

Therefore, math verification must be conducted by hand, and this is done only when a return is audited. Since only 5 percent of returns are audited at most and only after a substantial delay, opportunities to conduct automatic assessments are lost due to inability to issue the assessment letters generated by the math verification routine. This undoubtedly contributes to the incidence of form use errors and math errors on returns as a means to evade paying tax with little chance of being caught. Once a taxpayer realizes that they can use such easy subterfuges and escape detection, then they may pursue even more aggressive evasion strategies, such as non-filing and under stating income and over stating deductions. Over time, this undermines the credibility of the tax administration and reduces voluntary reporting compliance. If the rate of voluntary reporting compliance is low, then the government must spend even more money on enforcement in order to

collect a given amount of tax. Clearly, there are a number of opportunities to improve tax administration and, over time, increase voluntary reporting compliance.

In order for Jamaica to remain a competitive destination for investment, it is important that Jamaica's CIT is not too far out of step with that of her neighbors.

In the following section, I review the major features of the CIT in other CARICOM countries and contrast them with the CIT in Jamaica.

Major Features of the CIT in CARICOM Countries

The Caribbean Community and Common Market (CARICOM) was created in 1973 after more than a decade of various attempts to integrate the region. It includes 15 member states: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St Kitts, St Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago, and five associate members (Anguilla, Bermuda, British Virgin Islands, Cayman Islands, and Turks and Caricos Islands). Its purpose is to provide "dynamic leadership and service, in partnership with Community institutions and groups, toward the attainment of a viable, internationally competitive, and sustainable Community, with improved quality of life for all" (CARICOM). Empirically, this has led to a variety of functions, including creation of regional tax guidelines, the creation of a regional negotiation team, and the facilitation of democratic elections in member states.

There are obvious similarities between the CARICOM countries, (including the fact that they are all English speaking, with the exception of Haiti), they are all former colonies which have become independent in the last 100 years, and their tourism-driven economies. At the same time, each nation has a different tax structure with different incentives for foreign investors. Additionally, even the most superficial tax analysis

immediately shows the presence of tax competition in the region. Of the 14 nations studied, 12 have lower corporate income tax rates today than they did 20 years ago. The Bahamas has had no corporate income tax for the past 20 years; only Antigua and Barbuda has not lowered their corporate income tax rate from 40 percent. Clearly, the CARICOM countries compete with one another for foreign direct investment (FDI). As such, Jamaica must be aware of the tax structures in neighboring countries in order to remain a competitive destination for investment.

Table 12 summarizes the major features of the corporate income in CARICOM countries, for Tax Year 2004. The Bahamas has the minimum corporate income tax rate of 0 percent. The next lowest rate is 25 percent in Belize. The maximum rate is 45 percent in Guyana. The median rate is 35 percent (Antigua, Haiti, St. Kitts, and Trinidad and Bogota). The unweighted average rate is approximately 32 percent; if we exclude the Bahamas the average rate is 34.5 percent. In short, Jamaica's corporate rate is slightly less than the median and slightly greater (less) than the average rate, if we include (exclude) the Bahamas. Like Jamaica, most CARICOM countries exclude capital gains from taxation. In fact, Jamaica subjects some capital gains to a 7.5 percent transaction tax, suggesting a higher tax on capital gains than in other CARICOM countries, except Antigua which taxes capital gains at a rate of 40 percent.

Table 12: Major Features of the Corporate Income Tax in CARICOM Countries

Country	CIT Rate ¹ (in percent)	Capital Gains Exempt from CIT	Capital Gains Exempt from PIT	LIFO Allowed	Loss Carry Forward (in years)	Loss Carry Back (in years)
Antigua	35	Yes	Yes ⁷	No	6	No
Bahamas	0	Yes	Yes	n.a.	n.a.	n.a.
Barbados	36	Yes	Yes	n.a.	9	No
Belize	25	Yes	Yes	Yes	5	No
Dominica	30	Yes	Yes	Yes	5	No
Grenada	30	Yes	Yes	Yes	3	No
Guyana	45	No	Yes	Yes	Unlimited ⁵	No
Haiti	35	n.a.	n.a.	n.a.	n.a.	n.a.
Jamaica	33 1/3	Yes	Yes ⁶	No	Unlimited	No
St Kitts	35	Yes ³	n.a.	Yes	5	No
St Lucia	33 1/3	Yes	Yes	n.a.	6	No
St Vincent & the Grenadines	40	Yes	Yes	n.a.	n.a.	n.a.
Suriname	36	No	Yes	No	7	No
Trinidad & Tobago	35	Yes ⁴	No	n.a.	Unlimited	No

The information reported in this table was obtained through telephone interviews with officials in the respective country's Ministry of Finance, in the months of June and July, 2004.

¹ Corporate tax rate does not depend on business income. Although some countries do offer a special reduced rates for small businesses, but the general tax rate is still considered flat.

² For tax-exempt enterprises.

³ A 20 percent tax applies for short-term realized capital gains.

⁴ Only for businesses operating in designated free zones.

⁵ Losses have to be from a similar profit source, commercial companies subject to a 2 percent minimum tax.

⁶ There is a 7.5 percent transaction tax on capital gains.

⁷ Currently, the Commissioner of Inland Revenue is claiming that capital gains of companies should be included in ordinary income and taxed at a rate of 40 percent. (PWC).

In contrast to Jamaica which does not allow firms to use the LIFO method to value inventory, Belize, Dominica, Grenada, Guyana, and St. Kitts do. Compared to other CARICOM countries, Jamaica gives a very favor treatment to losses allowing companies to carry forward losses indefinitely. Only one other CARICOM country – Guyana – allows indefinite carry forward of losses. Otherwise, the maximum carry forward is 9 years, and the minimum carry forward is 3 years. The average and median carry forward of losses is approximately 5.5 years. Taken as a whole, Jamaica's corporate income tax is not especially generous or punitive relative to other CARICOM countries. Jamaica provides for an especially generous treatment of losses. In contrast to many CARICOM countries, however, Jamaica does not allow companies to use the LIFO method to value inventory.

CARICOM: Harmonization of CIT among member countries

The General Assembly of the Caribbean Organization of Tax Administration (COTA) identified the CIT as the most appropriate tax for consideration for harmonization (Source: D.F.S. (Taxation) Memorandum dated January 3, 2001). The following features of CIT have been identified as appropriate elements for harmonization:

1. Capital allowances

The CARICOM proposal would create 6 asset classes, as follows:

Class A: Plant and machinery with useful life of ten years or more (10 percent)

Class B: Plant and machinery with useful life of four to nine years (25 percent)

Class C: Plant and machinery with useful life of two to three years (50 percent)

Class D: Plant and machinery with useful life less than two years (100 percent)

Class E: (i) Buildings with an estimated life of 50 years or more (1 percent)

(ii) Buildings with useful life under 50 years (2 percent)

Class F Incentives: Where capital allowances are used as incentives, this class should allow for basis other than useful life in determining the rate to be applied.

2. Interest

The CARICOM proposal: Interest paid or payable on loans for the acquisition of capital shall be allowed as a deduction provided that where the interest is not paid within two years with respect to arms length transactions, and one year with respect to non-arms length transactions, the interest shall be added back in the year the deduction was taken.

3. Losses

The CARICOM proposal: There shall be allowed as a deduction in respect of the loss incurred in a basis or income year the amount of such loss against other income. Where any amount of such loss cannot be absorbed in the year in which it is incurred, such amount shall be carried forward provided that the amount allowed in any year is not in excess of 50 percent of the tax payable before the allowance of the loss brought forward.

4. Pensions

CARICOM proposal:

- (i) Amount paid into approved pensions fund shall be allowed as a deduction.
- (ii) Payments from current revenue should not be a deductible expense.

5. Minimum Corporate Tax

CARICOM proposal: Where it is determined by individual Member States that a Minimum Corporation Tax should be adopted, a tax shall be imposed at the rate of 1 percent on the gross receipts of a company for each year of income and may be used as a credit to final corporation tax liability for that year.

6. Insurance Premiums

CARICOM proposal: There shall be levied a tax called an Insurance Premium Tax at the rate of (x) percent of the gross premium income of the company.

7. Mergers and Slitters/Divisions

Where there has been a change of more than 50 percent in the underlying ownership or control of a company and

- a. where conditions obtain which are consistent with tax avoidance; or
- b. where there is a change in the nature of the business, any losses which exist at the time of the transaction shall not be carried forward.

Any losses which exist at the time of the transaction shall not be carried forward.

8. Disposal and Acquisition of Assets

CARICOM proposal: Where pursuant to the amalgamation, reconstruction or merger of a company with another company:

- a. assets are disposed of or acquired other than by way of a transaction at arms length, the asset shall be deemed to have been disposed of or acquired at market value.
- b. the assets are disposed of or acquired at arms length the written down value shall apply.

9. Agreements for Extra Regional Financing with implications for withholding taxes

CARICOM proposal: The rate for withholding tax on interest payment to a non-regional financial institution not to exceed twenty percent.

10. Exploration and research expenses

CARICOM Proposal: Exploration and research expenses incurred prior to commencement of business activities to be allowed as deduction and written off over a period of five years or more and such expenses incurred during the operations of the business to be treated as a revenue expense.

Generally speaking, the proposals are what presently holds in the case of Jamaica, except for the proposals (1) Capital allowances, (3) Losses, (5) Minimum Corporation Tax, and (10) Exploration and research expenses. In my opinion, proposals (1) and (10) would improve upon the current practice in Jamaica. Placing a 50 percent limitation of loss carry forwards, as proposed by (3), would substantially reduce the value of the deductibility of losses in present value terms. This proposal is surely meant to address the potential abuse and revenue loss from allowing companies to carry forward (back) losses indefinitely. While this is a legitimate concern, placing a 5 to 7 year limitation on the carry forward of losses would be a superior way to address such concerns. Similarly, it is not optimal to impose a Minimum Corporation Tax as a means to cope with the abuse of losses. A more efficient way to deal with losses is for Jamaica and CARICOM to adopt a

5 to 7 year limitation on the carry forward of losses. Further, Jamaica should increase the monitoring of companies claiming losses. The adoption of these proposals should not have major revenue consequences for Jamaica.

Summary of the Major Issues with Jamaica's CIT

Below is a brief summary of the major issues with the corporate income tax, and some reform options that might be suggested by these problems:

- 1) The corporate income tax rate should be reduced, and the revenue loss might be covered by expanding the tax base by
 - a. Repealing the exemption for Venture Capital firms;
 - b. Repealing the preferential rate for Building Societies;
 - c. Repealing the exemption for approved farmers;
 - d. Repealing all tax holidays; and/or
 - e. Including realized capital gains in the income tax base.
- 2) The system for calculating capital allowances is complex.
- 3) The depreciation rules could be revised to provide for a more comprehensive definition of intellectual property to allow depreciation of copyrights, trademarks, and general research and development.
- 4) *The Income Tax Act* could be amended to provide for a 3 year loss carry back and allow corporations to file consolidated returns.
- 5) Limitations on the acquisition of firms with losses and other tax and non-tax obstacles to restructuring firms should be carefully examined.
- 6) The provision allowing companies and approved farmers to carry forward losses indefinitely is a candidate for repeal.
- 7) *The Income Tax Act* could be amended to allow firms to use the LIFO method for inventory valuation.
- 8) Capital gains taxation? (Wallace and Alm, 2004)
- 9) Elimination of taxation of dividends of stocks not listed on the Jamaica Stock Exchange. (Wallace and Alm, 2004).

The revenue implications of these changes are discussed in a later section.

Clearly, *The Income Tax Act* contains many provisions that are designed, at least in part, to encourage investment. Given the lack of economic growth in Jamaica over the past 5 to 10 years, it may seem an inappropriate time to adopt changes such as those suggested above. Furthermore, it will be politically difficult to repeal provisions that benefit key industries and politically influential business interests. Many proponents will argue that their business cannot survive without such tax preferences.

According to this logic, the current system of tax preferences grants tax relief to businesses with low rates of return on investment. Otherwise, there is no basis for pleading for special tax treatment. As previously discussed, such tax relief reduces the user cost of capital and encourages additional investment in tax preferred activities. However, the tax rate on corporate income must be higher on those businesses that are not beneficiaries of tax preferences in order to make up the lost revenue from these preferences. This increases the user cost of capital in those businesses and, consequently, discourages investment in those activities. This approach presumes that government can be effective in “picking economic winners.”

Despite the numerous and generous, targeted tax preferences for investment, Jamaica still collects a substantial amount of revenue from the corporate income tax. This suggests that businesses that are not operating under a tax holiday must have high rates of return on investment. Otherwise, they would not be able to attract investment. In other words, investment funds will flow to those activities with the highest after-tax rates of return. Consequently, companies without the benefit of tax preferences are competing with firms with tax preferences for financing. Since companies without tax preferences

are able to attract investment funds in competition with preference firms, the non-preference firms must have a higher rate of pre-tax return; otherwise, they could not attract financing. Thus, the current system of tax preferences appears to have the perverse effect of steering investment away from businesses with higher pre-tax rates of return to businesses with lower pre-tax rates of return on investment. This may explain, in part, why Jamaica has a high rate of investment as a share of GDP but low economic growth compared to other Caribbean countries.

If business people respond to such tax incentives, and there is substantial evidence that they do, then the current system of corporate taxation may have the perverse effect of retarding economic growth rather than their intended effect of promoting economic growth. One of the key issues is whether tax holidays simply re-direct a fixed amount of capital into tax preferred activities or do tax holidays actually increase the amount of capital available for investment. This is a very controversial issue, and there is not a consensus in the literature.¹⁷

There is considerable evidence from around the world that governments do not have a good record of allocating capital to foster economic growth. Consequently, there is a growing consensus that governments should refrain from using tax policy to pick winners and losers. Rather, experts recommend that governments apply a uniform income tax and allow business people to direct capital to those investments with the highest rates of return.

¹⁷ For an excellent review of the empirical findings for developing countries see “Perspectives on the Role of Investment Incentives in Developing Countries.” by Robin W. Boadway and Anwar Shah in *Fiscal Incentives for Investment and Innovation*, edited by Anwar Shah. (Oxford: Oxford University Press), 1995.

In short, repealing targeted tax relief will broaden the tax base and allow the government to reduce the tax rate and, thereby, decrease the user cost of capital, which will increase investment. Since business people are putting their capital at risk, they have the greatest incentive to identify opportunities with the highest rates of return. Allowing business people to allocate capital has proven to be the surest way to achieve high rates of economic growth. Consequently, good tax policy design should be as neutral as possible, so that the tax system does not interfere with market signals about the relative rates of return on various investment opportunities. Though it may seem counterintuitive, repealing targeted tax relief may actually foster higher rates of economic growth. In fact, the current climate of stagnant economic growth may be just the right time to repeal targeted investment incentives and apply a uniform and lower corporate tax rate.

Part II: Jamaica's Tax Incentives

An Overview of Jamaica's Tax Incentives

Table 13 summarizes the main features of the tax incentive regimes available in Jamaica. Generally speaking there are approximately 12 Incentive Acts, which cover nearly every major industry in Jamaica, including tourism, mining, exporting industries, motion picture industry, shipping, agriculture, etc. Furthermore, the types of relief that are granted are quite generous. Many of these Incentive Acts provide for a 5 to 10 year tax holiday from most major taxes, including the corporate income tax, duties, and GCT. Many of them allow corporations to carry forward losses and capital allowances incurred during the holiday period for 6 years past the termination of the tax holiday.

There are a number of reasons to question the efficacy of such tax incentives as a means to increase investment and foster economic growth. Business people prefer low tax burdens to high tax burdens, all things else held constant. However, business people also find an educated labor force, low rates of crime, good transportation and communication networks attractive as well. Many of these characteristics depend in important ways on the level and quality of government expenditure. One often hears that major impediments to investment in Jamaica include the high costs of borrowing, the high costs of energy, and the high cost of security. It is difficult or impossible to compensate for deficiencies such as these through tax incentives. Furthermore, tax holidays are an inefficient way to encourage investment. Many investments that would have been made anyway benefit from the tax incentives as well as the additional or marginal investments induced by the tax incentives.

Table 13: Brief Description of Tax Incentives in Jamaica

Incentive Act	Holiday ¹	CIT	GCT	Duty	Dividend ²	Depreciation	Losses ³	Payroll Taxes non-residents exempt
1. Foreign Sales Corporation Act	5 years	exempt	exempt	exempt	-	-	-	exempt
2. The Urban Renewal Act	-	exempt	-	-	-	-	-	-
3. The Hotel (Incentives) Act	10/15 years	-	exempt	exempt	exempt	-	6 years	partial
4. The Export Industry Encouragement Act	10/5 years	-	exempt	exempt	-	-	6 years	-
5. The Resort Cottages (Incentives) Act	7 years	-	-	-	exempt	-	6 years	-
6. The Jamaica Export Free Zones Act	-	exempt	exempt	exempt	-	-	-	-
7. The Motion Picture Encouragement Act	9 years	-	-	-	exempt	-	-	-
8. The Shipping (Incentives) Act	10 years	-	-	-	-	-	-	-
9. The Industrial Finance Companies (Income Tax Relief) Act	-	-	-	-	-	-	-	-
10. The Jamaica National Heritage Trust Act	-	-	-	-	-	-	-	-
11. Bauxite & Alumina Industries Encouragement Act	-	-	-	exempt	-	-	-	-
12. Petroleum Refinery Encouragement Act	7 years	exempt	-	exempt	exempt	-	6 years	-
13. Approved Farmer Status	-	exempt	-	exempt	exempt	-	indefinite	-
14. Venture Capital	-	-	-	-	deductible	-	-	-
15. Accelerated Depreciation	-	-	-	-	-	2 years	-	-

Source: Based on author's interviews with relevant Ministry officials that administer the Incentive Acts

¹ Indicates the length of the tax holiday in years. ² Exempt from individual tax (exempt); or deductible from chargeable income of an eligible corporation.

³ Indicates the period of that losses can be carried forwards after the expiry of a tax holiday.

Tax incentives also create new opportunities for tax evasion, increase the costs of tax administration, and decrease voluntary reporting compliance. Corporations enjoying a tax holiday on the income of some part of their operations will be tempted illegally to shift income earned from taxable activities to the exempt entity and shift costs from the tax exempt activity to the taxable activities. Policing these schemes is extremely difficult and consumes scarce tax administration resources. Furthermore, tax incentives by their very nature create an uneven playing field. Therefore, firms that do not qualify or otherwise enjoy the benefits of a tax preference must pay tax on their profits while competing with firms that do not have to pay tax. In order to compete, firms subject to tax must find ways to decrease costs, including legal tax avoidance, such as restructuring their business to qualify for a tax incentive, and illegal tax evasion, such as non-filing, understating income and overstating deductions. If they cannot compete, they must exit the industry. Therefore, tax incentives may induce non-qualifying firms to reduce the rate of voluntary tax compliance, which, in turn, further increases the cost of tax administration.

Tax Incentives Offered by Other CARICOM Countries

Table 14 provides a summary of tax incentives offered by CARICOM countries. Briefly, like Jamaica, all CARICOM countries offer CIT/PIT holidays, preferential duty and GCT rates, investment tax credits, accelerated depreciations, and relief from other business taxes in order to attract investment. In particular, many CARICOM countries provide CIT holidays for agriculture, capital intensive industries, export companies, manufacturing, mining, and tourism. Below is a brief description of the tax incentive regime among CARICOM countries, by member country.

Table 14: Tax Incentives among CARICOM Countries for Tax Year 2004

Country	Tax Holidays	Tax Holiday Length in years	Reduced Tax Rate	Investment Allowance or Tax Credit	Duty/VAT Reduction	Accelerated Depreciation ¹	Enhanced Depreciation ²
Antigua	Yes	5	Yes ⁴	No ⁴	Yes	No	No
Bahamas	Yes	5	No	No	Yes	No	No
Barbados	Yes	11	Yes	Yes	Yes	No	Yes
Belize	Yes	5	Yes	No	Yes	No	No
Dominica	Yes	10	No	Yes	Yes	Yes	No
Grenada	Yes	7	No	No ⁴	Yes	Yes	No
Guyana	Yes	5	Yes ³	Yes	Yes	Yes	No
Haiti	Yes	5	No	No	Yes	No	No
Jamaica	Yes	5	Yes	Yes	Yes	Yes	Yes
St Kitts	Yes	5	No	Yes	Yes	No	No
St Lucia	Yes	10	Yes	Yes	Yes	Yes	No
St Vincent	Yes	10	No	No	Yes	No	No
Suriname	Yes	10	No	Yes	Yes	Yes	No
Trinidad and Tobago	Yes	5	No	Yes	Yes	Yes	Yes

Source: The information reported in this table was obtained through telephone interviews with officials in the respective country's Ministry of Finance, during the months of June and July, 2004.

¹ Deductions that can be made in a reduced time span

² Deductions for more than the value of the capital input.

³ Non commercial companies face a 35 percent corporate income tax.

⁴ Incentives available only through special permission of the Government.

Antigua

Tax Holidays

Tax incentives exist for a variety of industries, including International Business Corporations (IBC's), export-orientated businesses, manufacturers of "approved products," and tourism. The length of the tax holiday depends on the amount of local value added. This is calculated by taking the revenue from the sale of product and subtracting import costs, wages and other income payments (dividends, profits, interest, etc) to foreigners, and depreciation. The tax holiday length varies between 5 and 15 years, and there is a possibility of receiving a 5-year extension in certain circumstances. Those firms eligible for tax holidays are not obligated to pay duties on imports necessary for production. After the holiday has expired, firms can receive up to a 50 percent tax credit on specific export sales. Losses accrued during the holiday period can be carried forward after the holiday period as per normal tax laws.

Tax holidays are available for hotels constructed after January 2003, ranging from 7-year to 25-year exemptions, depending on the number of rooms built. Hotels are permitted to offset capital expenditures at a rate of 20 percent per annum for any five of the eight years following the holiday period.

Other Incentives

There is no personal income tax. It is possible to receive exemptions for exchange control regulations (the currency is tied to the U.S. dollar). A certain number of work permits are guaranteed. Special reduced corporate tax rates are available by application to the cabinet of Antigua and Barbuda. Initial allowances of 20 percent on

plant and machinery, but approval must be obtained from the Commissioner of Inland Revenue.

Bahamas

Tax Holiday

Firms in multiple industries are eligible for exemptions from custom duty taxes, including hotel developers, manufacturers of exports, agriculture, spirit and beer manufacturers, garment manufacturers, food processors, producers of handicraft and souvenir items, and cottage industries. Firms eligible for tax holidays are also exempt from business licenses and property taxes for the duration of the holiday. The duration of tax holidays range from 5 years to 20 years.

Other Incentives

Repatriation of profits is tax-free.

Barbados

Tax Holiday

Tax holidays are available to firms who demonstrate to the Minister of Finance that the product they manufacture would benefit Barbados economically through increased employment and wages. The length of the tax holiday depends on the percentage of sales that is local value added. For firms where local value added is at least 50 percent of total sales, the tax holiday length is 15 years. For those firms having between 25 and 50 percent local value added, the tax holiday length is 13 years. For firms having less than 25 percent but greater than 10 percent local value added, the tax holiday is 11 years. Firms engaged in a “highly capital intensive industry” (where capital investment is greater than \$BB 50,000,000) are eligible for a 15 year tax holiday. Losses

incurred during the holiday period can be carried forward for up to 9 years after the holiday ends. Dividends are exempted from taxation during the holiday period. Interest, however, is taxable during the holiday period. Imports from outside the CARICOM are exempt from taxes and duties during the holiday period.

Other Incentives

On certain foreign currency export earnings, a tax credit of 50 percent is available. Additionally, allowances exist for exporters. The size of the allowance depends on the percentage that export profits make of total profits; the maximum allowance is 93 percent. Grants are available for training. Additionally, subsidies exist for the leasing or purchase of factories.

Belize

Tax Holiday

Companies become eligible for tax holidays through approval by the government. Holidays usually last for five years from the start of production, but in certain cases, the government can expand the term up to 10 years. Companies that strictly export goods and that require large amounts of labor inputs (agriculture, agro-industrial production, etc) may be eligible for tax holidays up to 25 years.

Several other specific incentive packages exist. In 1994, Belize created a commercial free zone (CFZ) along its border with Mexico. For businesses located here and in the manufacturing, processing, packaging, warehousing, or distribution industries, multiple incentives exist, including exemptions from importing duties and quotas, a 5 year holiday from the corporate income tax (and a reduced tax rate afterwards), and

exemptions from all other taxes. Additionally, companies are allowed to carry forward their losses accrued during the holiday for three years after the holiday has ended.

In 1990, Belize passed legislation creating a Export Processing Zone (EPZ), which gives tax incentives to high technology “non-traditional” manufactured businesses. If a business qualifies, it receives full tax and duty exemptions for 20 years, with the possibility for a further extension. Additionally, losses accrued during the holiday can be deducted from profits after the holiday expires.

Other Incentives

The *Mines and Minerals Act* (1998) allows special privileges to Belizean mining operations. While no tax holidays are available, mining businesses face a reduced corporate tax (3 percent on minerals / 5 percent on metals), exemptions from custom duties on equipment, and the ability to carry losses forward in their entirety for 7 years. After 7 years, the losses can continue to be carried forward, but only up to half the value of that year’s profits. Trading businesses are eligible for a reduced corporate tax rate of \$BZ 20,000 per annum.

Dominica

Tax Holiday

Tax holidays exist depending on the percentage of profits that are domestic value added. For companies with more than 50 percent value added, a tax holiday of 15 years applies; for those between 25 percent and 50 percent, a tax holiday of 12 years applies, and for those between 10 percent and 25 percent, a tax holiday of 10 years applies. Additionally, capital intensive (greater than 25,000,000 EC\$) and enclave companies producing exclusively exports outside of the CARICOM region receive a holiday of 15

years. 1996 legislation allows IBCs to receive an automatic 20 year holiday from all local taxes and duties. Companies receiving tax holidays are also exempt from all duties and consumption taxes. Any losses incurred during the holiday can be carried forward for five years after the holiday has expired. Tax holiday eligibility is determined on a case-by-case basis by the National Development Corporation.

Other Incentives

Approved enterprises also receive several other incentives. A tax allowance is available for up to 20 percent of the capital expenditures incurred, which can be used after the expiration of the tax holiday. Tax credits are also available for significant exporters (greater than 10 percent of total profits). The credits range in value from 25 percent to 50 percent, depending on the percentage exports are of total profits. Accelerated depreciation is also available, depending on the industry.

Grenada

Tax Holiday

Grenada's *Fiscal Incentives Act* of 1974 allows businesses in manufacturing, processing, deep-sea fishing, and shrimping industries tax holidays. To qualify, the company must have a minimum of 40 percent local value added, create at least 10 jobs, and have a minimum investment of EC\$500,000. The length of the tax holiday depends on the percentage of local value added. For businesses with a value added between 40 percent and 50 percent of total profits, the length is seven years. For businesses with value added over 50 percent, the length is ten years. Additionally, businesses with exports contributing to more than 60 percent of their sales receive an extra five years to

their holiday. Businesses exclusively exporting outside the CARICOM region receive 15-year tax holidays.

The tax holiday entitles the eligible business to a waiver on duties for capital and equipment imports and a reduced import duty (50 percent) for commercial vehicle imports. The consumption tax and withholding tax are also waived. Separate legislation provides tax holidays for hotel enterprises. These holidays provide duty waivers on the imports of initial capital for the enterprise and for complete or partial exemptions of corporate income taxes for up to 10 years.

Other Incentives

Accelerated depreciation is granted in special cases on review by the comptroller.

Guyana

Tax Holiday

Tax holidays are only available for several specific industries. Guyana relies primarily on other generous allowances for investments “across-the-board.” The specific industries that receive tax holidays are “pioneering investments” (for either new products or for targeted locations) for up to 10 years, information/communication firms for up to 10 years, and garment and textile sectors for up to 5 years. In addition, there are tax holidays available on a regional basis. Those firms that invest in the interior region are eligible for holidays up to 10 years.

Other Incentives

Multiple additional allowances are available for a variety of industries, including sugar, rum distillation, mining, manufacturing of glass, paper, nails, house wares, cement, refrigerators, fertilizers, logging, breweries, hotels, canning and foundries, gold,

diamonds, and petroleum. These allowances include an initial allowance (10 percent) and an annual allowance (5 percent) on building construction, an initial allowance (40 percent) and annual allowance (20 percent) on machinery costs, allowances for patent rights, and deductions and allowances (60 percent initial, 10 percent per annum for four years) for research expenses. These allowances are in addition to the normal depreciation allowances. Significant exporters (export sales greater than 10 percent of total sales) are eligible for export allowances between 25 percent and 75 percent, depending on the percentage that export sales make up of total sales.

All investors are exempt from virtually all duties on capital necessary for production. In addition, all investors are able to carry over losses from previous years for as many years as they would like. Accelerated depreciation rules are also available to all investors for buildings and equipment. Finally, there is full and unrestricted repatriation for all capital, profits, and dividends.

Haiti

Tax Holiday

To qualify for a tax holiday in Haiti, a firm must meet at least one of several criteria. These criteria include the exploiting of local resources, creating of new jobs, introducing new technology, creating of linkages in the industrial sector, producing exports, deriving more than 35 percent of input costs locally, or adding value to imported goods in order to re-export them. If a firm qualifies, it is also eligible for a full waiver on the importation of capital with the exception of the importation of raw materials for domestic market-orientated firms, which receive only a 10-year exemption.

The length of the tax holiday depends on the location of the firm within Haiti. For those firms within the Port-au-Prince Metropolitan Area, the tax holiday lasts in full for five years. For those firms within designated industrial zones, the tax holiday lasts in full for 8 years. For those firms in neither area, the tax holiday lasts in full for 15 years. After the tax holiday has expired, there is a five year period where the tax burden is incrementally reinstated (1st year: 15 percent, 2nd year: 30 percent, 3rd year: 45 percent, 4th year: 60 percent, 5th year: 80 percent, 6th year: full).

Other Incentives

No other incentives noted.

St Kitts

Tax Holiday

Companies may qualify for tax holidays for up to 15 years if more than 10 percent of their profits are considered local value added. Firms where the value added is between 10 percent and 25 percent of profits qualify for a holiday of 10 years, firms where the value added is between 25 percent and 50 percent qualify for a holiday of 12 years, and firms where the value added is greater than 50 percent qualify for a holiday of 15 years. In addition, firms considered to be in an “enclave industry,” where they solely export outside the CARICOM industry, are eligible for a 15-year holiday. Companies that are eligible for a tax holiday are also eligible for a waiver of all duties on imported capital. Exemptions from the consumption tax may also be granted.

Hotels are also eligible for tax holidays; those that have more than 30 bedrooms are eligible for a 10-year holiday and those with less than 30 bedrooms are eligible for a 5-year tax holiday. In an effort to recruit foreign investment, St. Kitts also offers total tax

emption to foreign investors who invest in infrastructure (hotels, casinos, office buildings, homes, etc.) Approval is granted on a case-by-case basis. Additionally, there are several regional zones that provide tax incentives for investors. These zones include export processing free zones, tourist free zones, special commercial treatment zones, and special development free zones. Within export processing and tourist free zones, enterprises are exempt from custom duties on imports and exports and receive a 15-year holiday on all taxes. Within commercial treatment zones (normally found on the jungle frontier), businesses are exempt from value added taxes and customs duty is only 10 percent.

Other Incentives

The 1996 *Companies Act* exempts all companies from income, capital gains, and withholding taxes as long as they solely conduct their business with foreigners. There are no restrictions on the remittance of dividends and royalties.

St Lucia

Tax Holiday

Companies are eligible for tax incentive if they are incorporated in St. Lucia, they contribute to St. Lucia's economic development, they use St. Lucia's human and natural resources, they train local workers, they form linkages with other economic sectors, and they contribute to St. Lucia's earnings in foreign exchange. If they qualify, firms receive waivers of duties on plants, machinery, equipment, and raw materials, tax relief on export earnings, and tax holidays. Qualifying firms receive full and unrestricted repatriation of all profits and capital. Relief from the corporate income tax and duties can be either full or partial.

Companies may qualify for tax holidays for up to 15 years if more than 10 percent of their profits are considered local value added. Firms where the value added is between 10 percent and 25 percent of profits qualify for a holiday of 10 years, firms where the value added is between 25 percent and 50 percent qualify for a holiday of 12 years, and firms where the value added is greater than 50 percent qualify for a holiday of 15 years. In addition, firms considered to be in the 'enclave industry,' meaning they solely export outside the CARICOM industry, or firms that are considered capital intensive (where the capital investment is greater than twenty-five million Eastern Caribbean Dollars) are eligible for a 15-year holiday. There is the possibility of five-year holiday extensions. Hotels are also eligible for a tax holiday for up to 15 years under separate legislation. Decisions concerning tax holidays are made on a case-by-case basis.

Other Incentives

Manufacturers who do not qualify for the above incentives may still be eligible for a waiver of the consumption tax, service charge, and environmental levy on raw materials. Import duties on machinery and equipment may also be waived. The extent that these incentives are available depends on the firm's local value added.

St. Lucia has also classified some areas (Vieux-Fort, Anse La Raye, Soufriere, Canaries, and Dennery) as special development areas. Eligible businesses in these areas can receive incentives including reduced corporate tax rates, waivers from import, stamp, consumption, and property taxes, and higher tax allowances or accelerated depreciation.

In addition, a consumption tax allowance is available, which ranges from 20 percent-60 percent of the consumption tax paid in the previous year. There are also income tax allowances made for hiring university graduates. Export allowances and

foreign exchange allowances are also available. Finally, companies with annual sales over \$250,000 are exempt from the consumption tax.

St Vincent and the Grenadines

Tax Holiday

International companies (IBC's) are exempt from all taxes for a 20-year period. Investment incentives are available for firms in light manufacturing, agro processing, information technology, tourism, and other services. Incentives include exemptions from consumption tax and custom duties, repatriation of profits, and tax holidays. Tax holidays vary between 10 and 15 years, depending on the percentage of local value added, the level of employment, the amount of economic linkages created, the level of investment, and the opportunity to earn foreign exchange.

Other Incentives

No other incentives noted.

Suriname

Tax Holiday

Ten-year tax holidays are currently available for businesses investing in certain sectors. To become eligible, enterprises must meet certain criteria, including a minimum amount invested and the ability to show that the investment will prove beneficial to Suriname. Companies receiving a tax holiday are exempt from corporate income taxes. Companies may apply for specific exemptions from certain custom duties. Holidays are granted on a case-by-case basis. This legislation is relatively unpopular, and the government is considering removing it.

Other Incentives

Accelerated depreciation, where the entire cost of a capital input can be written off in the first year, is available in lieu of a tax holiday. Investment allowances and tax credits are available, but no legislation has created a specific procedure, requiring direct negotiation with the government.

Trinidad and Tobago*Tax Holiday*

Businesses with more than 10 percent local value added, those that exclusively produce exports for outside the CARICOM region, and those with capital intensive investments (greater than \$EC 50,000,000) are eligible for tax incentives. These incentives include full or partial tax holidays for up to 10 years, full or partial relief from customs duties, unrestricted carrying forward of losses for the first five years after the holiday expiration, and total or partial relief from the income tax of dividends. Additionally, capital-intensive enterprises are exempt from the Value Added Tax.

Other Incentives

Multiple allowances and tax credits are available for eligible firms. A tax credit of 15 percent of chargeable profits is available for locally owned small companies, those companies carrying on business in a designated regional development area, for companies in approved activities (including those earning foreign currency, those contributing substantially to job creation, and those stimulating technological development and those using local resources). A 15 percent tax credit on the capital expenditures of property development companies is also available.

Hotels and those in the tourism industry are eligible for tax holidays between 5 and 10 years, accelerated depreciation for eligible equipment, a capital allowance for approved capital expenditures, free repatriation of capital and dividends, the ability to carry over losses incurred during the holiday, tax exemptions on dividends, and an exemption from customs and excise duties on building materials and equipment. Those in the oil sector receive substantial allowances for expenditures of 20 percent per annum and 100 percent allowances for workovers and drilling wells.

The Income Tax (*In Aid of Industry Act*) provides for substantial allowances for buildings and structures (10 percent initial), plants and machinery (50 percent initial), and annual depreciation allowances on plants and machinery. Enhanced deductions are available for oil refineries (120 percent) and land expenditures by producers (40 percent initial, 20 percent for the next five years for 140 percent total).

For those enterprises exporting outside the CARICOM region, substantial additional incentives apply. These include a grant for up to 50 percent of new market development costs, tax deductions of 150 percent for promotional expenses, and an exemption from the corporation tax. Finally, companies operating in designated free zones are wholly exempt from all duties, corporate taxes, withholding taxes, value added taxes, and capital gains taxes.

Foreign Direct Investment: Comparisons among CARICOM countries

Many factors, in addition to tax policy, play an important role in determining the level of foreign direct investment (FDI) in a country. In particular, political stability, regulatory policy and practices, the cost of labor, energy, and interest, and exchange rate

stability are important determinants of FDI, particularly in developing countries.¹⁸ Table 15 summarizes the share of inbound foreign direct investment among CARICOM countries for the period 1991 to 2002. Suriname has the worst performance during this period. Suriname's performance is largely attributable to political instability and official and unofficial hostility to foreign investment. More specifically, areas outside Paramaribo were unsafe during the 1986-92 insurgency. Since 1992, the government has made some progress in re-exerting legal authority in the interior. In the spring of 1994, a dam belonging to Suralco, a bauxite company, was occupied and hostages held (source: www.surinam.net). Despite recent improvements, Suriname was the only nation in the region that did not encourage foreign investment. Even though other nations, such as Haiti experienced political instability during this period, they generally were much more open to foreign investment than Suriname. If we exclude Haiti and Suriname from our sample of CARICOM countries, then the Bahamas, with an average rate of 2.51 percent, has the lowest average rate of FDI as a proportion of GDP during this period; this despite the fact that the Bahamas does not have a corporate income tax.

St. Kitts has the highest average FDI-to-GDP rate during this period, with an average rate of 14.3 percent. It is worth noting that St. Kitts has a CIT rate that is slightly higher than Jamaica's at 35 percent. During this period, Jamaica's average FDI-to-GDP rate was 4.46 percent, which is considerably less than that of St. Kitts and the median rate of 6.51 percent for our sample of CARICOM countries, or 7.67 percent, if we exclude Haiti and Suriname. In fact, 8 of the 13 countries in Table 15 have higher average FDI-to-

¹⁸ See, for example, "Do Taxes Matter for Foreign Direct Investment?" by Anwar Shar and Joel Slemrod in *Fiscal Incentives for Investment and Innovation*, edited by Anwar Shah. (Oxford: Oxford University Press), 1995.

GDP rates than Jamaica. While Jamaica's incentive regime seems generous relative to other CARICOM countries, this has not resulted in an above average rate of FDI.

Revenue Cost of Jamaica's Tax Incentives

In order to evaluate the performance of Jamaica's tax incentives, it is essential to examine their revenue cost. It is very difficult to get complete data on revenue cost of tax incentives in Jamaica. For example, companies enjoying tax holidays may not file corporate income tax returns. In any event, Tables 16 and 17 provide estimates of the revenue cost of incentives, by type of relief.

Table 16 shows that 137 companies enjoyed reduced tax liabilities in the amount of J\$1,594 million due to incentive CIT holidays. Similarly, 26 individuals enjoyed reduced PIT liabilities in the amount of J\$1 million due to incentive PIT holidays. In addition, incentives account for J\$15,778 million in foregone revenue due to reduced Customs Duty, GCT, and Stamp Duty. Table 17 shows that the relief of duty on raw materials for manufacturing and import of goods for the bauxite and alumina industry account for 65 percent of the revenue foregone from Customs Duty, GCT, and Stamp Duty relief. The total revenue cost of Jamaica's tax incentives is J\$18,944 million.

Table 15: Foreign Direct Investment as a Percent of GDP among CARICOM Countries, between 1991 and 2002

Country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Antigua	13.35	4.63	3.33	4.96	6.38	3.59	3.94	3.68	4.71	5.00	5.60	5.05
Bahamas	-0.04	0.01	0.82	0.68	3.05	2.35	5.33	3.52	3.26	5.09	2.06	3.95
Barbados	0.43	0.91	0.57	0.74	0.63	0.67	0.67	0.66	0.70	0.75	0.72	0.43
Belize	3.48	3.67	2.56	2.17	3.08	2.36	1.64	2.48	5.87	1.94	3.98	4.83
Dominica	8.42	10.64	6.59	10.56	24.52	7.53	8.61	2.51	6.72	3.98	4.50	5.67
Grenada	6.33	9.01	8.08	7.35	7.24	5.77	10.64	13.89	11.00	9.11	12.28	9.90
Guyana	3.54	39.21	14.91	19.56	11.97	13.17	7.02	6.50	6.94	9.42	7.88	6.03
Haiti	0.58	-0.12	-0.14	-0.14	-0.09	0.14	0.12	0.29	0.73	0.36	0.13	0.18
Jamaica	4.07	5.03	2.88	2.67	2.54	2.83	2.73	4.78	6.80	5.90	7.59	5.69
St Kitts	13.01	6.88	6.96	6.90	8.89	14.32	7.17	11.11	18.94	29.15	25.59	22.68
St Lucia	12.89	8.22	6.87	6.27	5.92	3.22	8.24	13.21	12.45	8.07	3.44	3.30
St Vincent	3.67	5.96	13.15	19.64	11.52	15.22	31.56	28.10	16.97	8.71	6.06	5.26
Suriname	880.53	-1,896	-756	-2,130	-3,979	2,558	-1,018	4,595	-2.73	-10.92	-3.51	-8.91
Trinidad and Tobago	2.71	3.14	8.14	10.66	5.61	6.85	16.09	12.11	5.38	5.78	7.53	7.91

Source: Author's own calculations, using UNCTAD and IMF Data.

Table 16: Revenue Cost of Tax Incentive, by Type of Tax

(in millions J\$)

Type of Relief	Source	Number	Tax Loss
A. CIT Tax Holidays	ITO2 file	137	1,594
B. Duty/GCT/Stamp relief (see Table 16 for detail)	C-78	192,551	15,778
C. Waiver of Penalty, interest, and surcharge	506/025	546	365
D. Hotel Incentive & Resorts & Cottages Acts – CIT Holiday	Min. Tourism	103	1,206
E. PIT Tax Holiday	ITO1 file	26	1
Total		193,363	18,944

Source: Author's own calculations.

Table 17: Relief from Duty, GCT, and Stamp Duty, by Type of Tax Incentive

Description	Frequency	Value of Import	Calculated Duty/GCT	Duty/GCT Payable	Duty/GCT Relief	Share of Total (in percent)
Raw materials for use in manufacturing	52,868	74,976,439,664	5,905,598,123	0	5,905,598,123	0.37
Bauxite and alumina industry	50,228	32,798,064,993	4,409,923,228	86	4,409,923,143	0.28
Motor Vehicles for specified category of persons	3,472	3,263,260,089	1,760,442,045	0	1,760,442,045	0.11
Warehousing - Duty Free Shops	10,786	5,346,265,470	1,533,615,113	0	1,533,615,113	0.10
Modernisation program	9,497	4,367,323,890	657,367,628	0	657,367,628	0.04
Hotel incentives	14,526	2,614,055,404	417,920,660	0	417,920,660	0.03
Encouragement (other)	1,829	2,031,177,006	305,027,467	0	305,027,467	0.02
Export Industries (EIEA)	602	1,552,696,044	232,397,505	0	232,397,505	0.01
General Remission / Waiver	4,874	821,540,619	185,825,616	0	185,825,616	0.01
Trucks, agricultural activities	397	422,409,421	206,507,637	38,392,467	168,115,170	0.01
Motion picture industry	1,051	405,534,766	84,239,042	0	84,239,042	0.01
807 Companies	39,894	21,022,080,476	66,380,925	0	66,380,925	0.00
Energy conservation	1,091	135,676,412	27,109,737	6,780,491	20,329,246	0.00
Other incentives	359	87,577,339	13,468,906	0	13,468,906	0.00
Single Entity Freezones	345	290,493,565	5,891,032	0	5,891,032	0.00
New Manufacturers	620	278,417,061	5,568,341	0	5,568,341	0.00
Imported goods, economic development	12	9,069,872	2,063,025	0	2,063,025	0.00
Imported goods, bauxite and aluminum	76	12,428,905	1,864,336	0	1,864,336	0.00
Manufacturing equipment	22	8,854,255	1,447,131	0	1,447,131	0.00
Industrial Incentive	2	20,005	5,926	0	5,926	0.00
Total	192,551	150,443,385,256	15,822,663,423	45,173,044	15,777,490,379	1.00
Food for the Poor	2,980	2,909,509,332	58,190,187	0	58,190,187	
Remission by Minister	51,624	42,326,588,240	9,378,065,517	35,107,632	9,342,957,885	

In short, there is a substantial revenue cost of Jamaica's incentive regime without a clear benefit in terms of increased investment or economic growth. There is very little evidence on the effectiveness of tax holidays and other fiscal incentives in developing countries. However, Jack Mintz (1995) has provided some evidence. He argues that if the objective of the country is to encourage investment in structures and other durable capital, the tax holiday seems to be a poor tax incentive, at least in comparison with other potential tax incentives, such as accelerated depreciation or investment tax credit.¹⁹ Accelerated depreciation or investment tax credit result in significantly lower loss in tax revenue because, unlike the situation in tax holiday, taxes remain on other assets used by the firm.

¹⁹ "Tax Holidays and Investment?" by Jack M. Mintz in *Fiscal Incentives for Investment and Innovation*, edited by Anwar Shah. (Oxford: Oxford University Press), 1995.

Part III: Reform Options

Eliminate the Corporate Income Tax

Benefits:

- This would lower the user cost of capital and, thereby, stimulate investment and job creation.
- This would considerably simplify the tax system.
- This would create a more level playing field for all businesses, than the current system of targeted tax relief.
- This would allow the tax administration to get out of the business of enforcing this very complex tax and re-deploy its resources to the enforcement of others that yield more revenue.

Costs:

- There would be a loss in tax revenue of approximately J\$7,122 million or 7 percent of total tax revenue, on an FY 2002/03 receipts baseline.
- In addition to the loss of corporate tax receipts, eliminating the corporate tax may have two offsetting effects on total revenue. First, there may be a loss in tax revenue due to the shifting of income from wages and salary to corporate profits in order to take advantage of the tax rate differential created by the elimination of the CIT. Second, if the tax cut stimulates employment, there may be growth in PIT revenues. It is difficult to say which of these two effects will be larger.
- Depending upon which tax is used to offset the revenue loss, repeal of the CIT would almost certainly make the tax system more regressive.

Harmonize the corporate and individual income tax rates at 25 percent

Benefits:

- This would eliminate some of the incentives to shift income in order to take advantage of tax differentials.
- The tax system would be more neutral regarding the corporate form of organization.
- Cutting the corporate tax rate by approximately 24 percent would lower the cost of capital and, thereby, stimulate investment and job creation.

Costs:

- Assuming a modest behavioral response to the tax rate reduction of 0.49 percent increase in chargeable income for every 1 percent decrease in the corporate rate, cutting the corporate rate to 25 percent would cost J\$1.39.8 million in corporate tax receipts or an approximately 1 percent of total tax revenue, on an FY 2002/03 receipts baseline.
- Depending on the tax offset, harmonizing the individual and corporate rates at 25 percent would make the overall tax system more regressive.

Eliminate all CIT holidays*Benefits:*

- This would increase tax receipts by at least J\$733.7 million, on an FY 2002/03 basis, if there is no grandfathering of existing tax holiday agreements.
- This would create a more level playing field for all business.
- This would simplify the administration of the tax system.
- This would greatly increase the horizontal equity of the tax system, and this may even increase the vertical equity as well.

Costs:

- Businesses currently benefiting from tax holidays would experience an increase in their taxes.
- The government would be renegeing on a promise to grant a tax holiday for an investment of a certain size. The government could agree to grandfather all firms that have an existing agreement with the government.
- If there is a grandfather for existing tax holidays, then the proposal would not be revenue neutral.

Technical Revisions to the CIT

Simplify capital allowances by reducing the number of asset types to five (5) and eliminating the special treatments for Basic Industries, etc., expand the definition of intellectual property for depreciation purposes, and allow the LIFO method of inventory valuation

Benefits:

- This would simplify tax system, which would benefit administration and compliance. These revisions would take Jamaica's CIT a long way toward bringing it into conformance with the harmonization proposals of CARICOM, described above.
- This would create greater incentives for firms to invest in research and development.
- This would eliminate one of the obstacles that may be preventing some firms from locating in Jamaica or expanding their operations here.
- This would partially protect firms from inflation.
- This would eliminate one of the obstacles to restructuring failing enterprises in Jamaica.

Costs:

- This may be a small revenue loser, but the revenue effects very difficult to estimate with available data.
- Depending on the revised depreciation rules, this may increase the user cost of capital and discourage investment and job creation. It would be possible to revise the depreciation rules in such a way as to leave the user cost of capital unchanged.

Replace the CIT with a revenue neutral Business Value Added Tax (BVT)

Briefly, a BVT would tax company profits, payroll, and interest expense at a flat rate.²⁰

Benefits:

- A flat-rate BVT would improve the horizontal equity of the tax system and broaden the tax base thus increasing the perceived fairness of the taxation of business income.
- Since a flat-rate BVTR is more neutral than the current CIT with tax holidays for approved investments in certain sectors of the economy, a flat-rate BVT would improve the allocation of capital to those investments with the highest rates of return.

²⁰ For a discussion of a BVT see *Jamaica: Business Tax and Incentive Reform*. Foreign Investment Advisory Services. November 2003.

Costs:

- Companies subject to the BVT would still have to compute corporate profits, so there would not be any reduction in the costs of compliance or administration.
- In the case of the BVT, the United States Internal Revenue Service only allows companies to claim tax credits for the portion of the tax that falls on company profits. Since a revenue neutral BVT rate on a broader tax base would be considerably lower than the current CIT on a much narrower tax base, the amount tax credits would fall. In effect, there would be a transfer from the Jamaican Treasury to the U.S. Treasury.
- There may be considerable adjustments costs for companies and individuals to adjust to the new tax regime.

Special CIT rate of 10 percent for hotels²¹

Harmonize the CIT and PIT rates at 25 percent, eliminate all CIT & PIT tax holidays with a special rate of 10 percent for hotels (grandfathering all existing commitments).

Benefits:

- Eliminating income tax holidays would broaden the base and make the tax system more neutral, and, thus, capital would be allocated more efficiently.
- Hotels would contribute more to the Treasury for the government services that they use, such as roads, sewage, police, etc.
- Reducing the CIT to the PIT rate would lower the user cost of capital and stimulate investment.
- Eliminating income tax holidays would simplify administration of the CIT.

Costs:

- By grandfathering existing commitments of the government, there would be a loss of approximately J\$1.39.8 million in corporate tax receipts, or an approximately 1 percent of total tax revenue, on an FY 2002/03 receipts.
- Eliminating income tax holidays and subjecting hotels to the CIT even at a 10 percent rate is likely to lead to opposition from sectors that are adversely affected.

²¹ This proposal was included in the FIAS report.

References

- Boadway, R. W. & Shah, A. (1995). "Perspectives on the Role of Investment Incentives in Developing Countries in *Fiscal Incentives for Investment and Innovation*. Anwar Shah (ed.). Oxford: Oxford University Press.
- Foreign Investment Advisory Services. (2003, November). *Jamaica: Business Tax and Incentive Reform*. Unpublished Manuscript.
- Mintz, J. M. (1995). "Tax Holidays and Investment?" in *Fiscal Incentives for Investment and Innovation*. Anwar Shah (ed). Oxford: Oxford University Press
- Rosen, H.S. (2002). *Public Finance*, 8th ed, New York: McGraw-Hill.
- Shar, A & Slemrod, J. (1995). "Do Taxes Matter for Foreign Direct Investment in *Fiscal Incentives for Investment and Innovation*. Anwar Shah (ed). Oxford: Oxford University Press.
- U.S. Department of the Treasury. (1992). *Integration of the Individual and Corporate Tax Systems*. Washington, D.C.: U.S. Government Printing Office.
- Wallace, S. & Alm, J. (2004) "The Jamaica Individual Income Tax." Working Paper #5. Jamaica Tax Reform. Andrew Young School of Policy Studies, Georgia State University