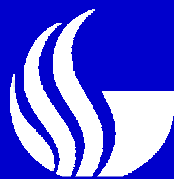


## International Studies Program

Working Paper 04-26  
December 2004

# **The Land Value Tax in Jamaica: An Analysis and Options for Reform**

David L. Sjoquist



Georgia State  
University

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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](mailto:ispaysps@gsu.edu)  
Internet: <http://isp-aysps.gsu.edu>

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# ***The Land Value Tax in Jamaica: An Analysis and Options for Reform***

**David L. Sjoquist**

*Andrew Young School of Policy Studies, Georgia State University*

## **Abstract**

This Working Paper on the property tax contains an Executive Summary and four chapters. In Chapter One we describe how the Jamaican property tax functions. In Chapter Two we present an analysis of various problems and issues that surround of the property tax. Chapter Three, which was co-authored with Ki-Whan Choi, presents an analysis of a land value tax versus a capital value tax. Finally, in Chapter Four we present options for reform.

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## **Executive Summary**

Jamaica's property tax is levied on the value of unimproved land. In 2002, 676,702 parcels were valued—this is thought to be about 90 percent of all taxable parcels. The tax rate structure is probably the most complicated feature of the tax. Jamaica uses a progressive property tax rate structure with four rate brackets and a top marginal rate of 1.75 percent. There also are “caps”, or maximum property taxes payable, specified for 11 value classes of land.

Valuation of land is the responsibility of the Land Valuation Division (LVD) of the National Land Agency (NLA), and collections are the responsibility of the Inland Revenue Department. Currently, all property tax revenues, less a charge for collection, are earmarked for local governments.

### **Problems and Issues**

The Jamaican property tax is beset by a number of shortcomings that might be addressed by a comprehensive reform package.

### **Low Revenue Productivity and Growth**

The revenues derived from the tax are low due to compliance problems, lack of revaluation, a complicated tax structure and the presence of preferential treatments. While the *Land Valuation Act* provides for new valuations every five years, actual valuations have been done on approximately a nine-year schedule. At present, the property tax generates an amount equivalent to about 1 percent of total revenue and about 0.23 percent of Gross Domestic Product. This amount is low by comparison to other countries and low by comparison to the historical performance of the property tax in

Jamaica. An issue to be addressed is whether the Government wants the property tax to play a larger role in the revenue system. As we show in this report, there are numerous ways by which property tax revenues can be increased.

### **Revenue Growth is Slow and Sporadic**

The property tax base is legally fixed between general revaluations (except for increases in land value due to subdivisions or changes in land use). This means that there is limited growth in revenues, even if land values are growing. Meanwhile, the local government expenditures that these taxes finance continue to increase during the period between revaluations.

That general revaluations are now on a nine-year cycle, rather than the five-year cycle prescribed by law, complicates the problem. When a general revaluation does occur, there is a large one-time increase in potential tax liability. Because of expected taxpayer unrest (as in 2002), tax rates are reduced, which further dampens revenue productivity. For example, if the 1993 tax rate schedule had been fully applied to the new (2002) tax roll, liabilities would have increased by a factor of 9.8. This seems too great a tax shock to be feasible.

### **The Rate Structure is Complicated and Irrational**

There is a complicated and irrational rate structure that comes about because of the caps that were put in place in 2002 to mitigate the tax shock. These caps create some unacceptable notches in the distribution of tax burdens. For example, going from a property value of J\$300,000 to J\$300,001, i.e., a one dollar increase in property value, the property tax liability increases by J\$100. Similarly, for a one dollar increase from

J\$5,000,000 to J\$5,000,001, the property tax liability increases from J\$11,000 to J\$73,000, an increase of J\$62,000!

These caps have a number of impacts. For one, the owner of a parcel with a valuation just above a notch will be more inclined to object to the valuation than an owner of a parcel just below the notch. Another impact is that the introduction of the caps makes the distribution of tax burdens less progressive. Particularly noteworthy is the reduction in the average effective tax rate for parcels with a value in excess of J\$200 million.<sup>1</sup> Finally, the presence of the caps reduces tax revenue. For 2003, the presence of the caps resulted in a total property tax liability that was about 25 percent below what the liability would have been in the absence of the caps.

### **Enforcement**

The collection rate for property taxes is low, and declined precipitously after 2002. For 2001-02, the one-year collection rate (i.e., the percentage of tax liability paid within one year) was 52.0 percent, but fell to 25.5 percent for 2002-03, and then rose to 40.4 percent for 2003-04. For the 2002-03 tax liability, as of February 2004 property taxes on 37 percent of the parcels were paid in full, 16 percent were paid in part, and for 47 percent of the parcels no payment was made.

The to-date collection rate (i.e., the percentage of tax liability paid as of the most recent report date) is lowest for the highest value class, while the highest collection rate is observed for the mid-value classes. The range of collection rates across value classes is 15.6 percentage points. Collection rates vary widely across parishes, from 30 percent in Manchester to 56 percent in Kingston.

**Equity**

Whether Jamaica's property tax is equitable, in terms of how the distribution of tax burdens falls, depends on how one defines equity. One take is to examine the pattern of tax burdens across land value classes. We find that the effective tax rates tend to rise with land values. About 67 percent of property taxes are paid by those parcels with land values above J\$2 million, which accounts for 5.3 percent of all parcels. If land value and income are positively related, we can conclude that the distribution of property tax liabilities is progressive. However, we can also note that nearly half of all property tax liability is with commercial and industrial properties, and some of this tax burden maybe shifted forward to consumers, thereby lessening the progressivity.

Another way to look at fairness or equity is to examine horizontal equity, i.e., the extent to which equally situated property owners pay the same level of taxes. Here we may point to the low collection rates in the top value class. Our data show that the property owners in the highest value class pay only about one-third of the tax due, versus an overall to-date collection rate of 42 percent. We find that within each property value class there is a significant variation in the extent to which payment is made. It seems unfair that some owners pay their full liability while others do not.

The equity issue is complicated by the theoretical permissive that a land value tax is capitalized into the market value of the land. Thus, the burden of a tax on land is borne by the owner of the land at the time the tax is first imposed, not the current owner.

**Accuracy of Valuation**

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<sup>1</sup> The effective tax rate is defined here as the tax liability divided by land value.

The LVD staff appears to be well trained, and capable of producing an accurate roll of land valuations. They are, however, limited in what they can do by the data with which they work. The baseline data on land sales are the declared values on sales prices reported to the Stamp Office. Because the stamp duty and property transfer tax combine to 13 percent of the transaction value, there is a significant incentive for under-declaration.

Another issue is the absence of any ex-post verification of the accuracy of the valuations. Sales-ratio studies could provide a check on the accuracy of the valuations, even if done only in the years following general revaluation.

### **Options for Reform**

There are a number of options to consider with respect to the property tax to increase its effectiveness as a revenue generator, to increase its transparency and to meet various equity objectives. There is also a range of options for increasing the overall level of property taxes, but the choice among these depends on the Government setting a target level of revenue productivity for the property tax.

#### **Remove the property tax caps**

The current property tax liability caps create an irrational and unfair structure of property tax rates. One reform option would be to eliminate the caps. This would remove disincentives for under-declaration of values, make the property tax more equitable, and increase revenues by about 25 percent.

The drawback is that property tax liabilities would increase, with about 70 percent

of this increase coming in the top value class (over J\$2.5million). Unless stronger enforcement options were adopted, this might result in a further reduction in the collection rate.

### **Create a threshold exemption**

A threshold exemption would eliminate a substantial number of parcels from the property tax system, reduce the cost of property tax administration, and increase the progressivity of the effective rate structure. Over 27 percent of the parcels now on the tax roll have values of less than J\$200,000. These parcels account for 4.2 percent of the taxable value and tax liability under the current tax structure. An exemption of J\$200,000 would allow every owner to deduct J\$200,000 from the assessed value in order to arrive at taxable value. Thus, the loss in tax liability would be larger than 4.2 percent since every owner would receive a benefit. We estimate that under the current rate structure but without the caps in place the reduction in tax liability resulting from a J\$200,000 exemption would be 13.4 percent. However, such a threshold would eliminate nearly 190,000 parcels from the rolls, thus reducing staff time and office resources in mailing and collecting property taxes and reduce costs devoted to collecting delinquent property taxes from the owners of parcels that are worth less than J\$200,000. Of course, the threshold exemption could be set at any amount; a threshold of J\$300,000, for example, would reduce tax liability by 19.0 percent.

### **Revise the nominal tax rate structure**

There are an infinite number of tax rate schedules that might be adopted. Each of these could be modified to hit a higher or lower revenue target. The “right” schedule

depends on what the government wants to achieve. A progressive rate structure, as presently exists, provides an incentive to subdivide property for purely tax purposes. Moreover, the higher rates in the top land value bracket encourage tax evasion. But the progressive rate structure also provides a disincentive to hold large tracts of land, thereby encouraging the breakup of large parcels, and discourages the assembly of large tracts. It also can result in the imposition of higher tax burdens on the owners of higher valued residential properties. One choice is to hold to the present progressive rate structure, but to eliminate the caps.

Another option is to move toward a flat rate property tax, either with or without a threshold exemption. There are several advantages to a flat rate structure. First, it would eliminate the incentive to subdivide property in order to reduce property tax liability. Second, it makes discretionary rate increases easier than a structure with multiple rates. Third, there is no bracket creep if the rates are indexed to inflation or if parcels are revalued. Fourth, a lower flat rate might reduce evasion among the higher bracket payers.

In Chapter Four, several alternative tax liability-neutral tax rate structures are discussed, each of which would allow a more gradual increase in marginal rates. One option that might have appeal is the modified flat rate at 0.66 percent with an exemption of J\$300,000. This reform, compared to the present system, without caps, would hold revenues constant if collection rates remained constant. It would have the advantage of eliminating over 280,000 parcels from the tax rolls, hence reducing administrative costs. In terms of distributional effects, it would reduce tax burdens for all of those owners of

parcels with values up to J\$500,000, and for those owners with parcels valued at more than J\$5 million. There would be 444,000 “winners” under this scheme, and 253,000 “losers.”<sup>2</sup> In terms of types of property, the biggest shift would be an increased liability for commercial properties. Chapter Four also presents several rate structures that would yield an increase in tax liability.

### **Relief, Derating and Exemption**

The property tax base is reduced by several forms of exemptions and preferential treatment. The list of types of property that is exempt from property tax seems reasonable and the relative taxable value of exempt parcels is small. Derating and statutory relief do not reduce aggregate taxable value by a substantive amount. Discretionary relief amounts to a very small reduction in property tax collections. Consideration could be given to formalizing the discretionary relief program.

### **Increase the Buoyancy of the Property Tax**

As noted above, property tax revenues do not increase adequately between general revaluation periods. A more steady increase in property tax revenues may be accomplished in two ways: (a) conducting more frequent general revaluations as required by the law, and (b) developing a method of indexation to provide some annual revenue growth.

**Conduct General Revaluations More Frequently.** Waiting nine or 10 years between revaluations has three undesirable effects. First, it significantly reduces the

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<sup>2</sup> A “winner” is one whose tax liability is reduced.

revenue income elasticity of property tax revenue. Second, it allows large inequities to arise among land owners since market values change differentially by parcel during these long periods between revaluations. Third, it results in a shock to taxpayers at the time of revaluation (because their tax base has gotten so far out of line with true land values) and this causes political leaders to adopt tax rate rollbacks which further erode the revenue productivity of the property tax. Thus, it would be desirable to conduct general revaluations every three to five years.

One possible drawback to more frequent general revaluation is cost. The cost of the 2002 general revaluation is estimated at J\$110 to J\$115 million. This is equivalent to about 4.6 percent of current annual property tax liabilities, and about 10 percent of annual property tax collections. To ensure that a general revaluation is conducted at least every five years, the government could consider allocating J\$20 million from the property tax revenues to a special fund that would be available to conduct the next revaluation, which should be in 2007.

**Index Valuations between General Revaluations.** Another possibility is to simply adjust land values each year by an arbitrary index. One likely candidate is the rate of inflation. This approach would have some advantages. First, it would produce a steady increase in revenues, about in line with the general rate of inflation. Second, it would lessen the shock at the time of the general revaluation. Our results show that if the CPI had been used as the index between 1993 and 2002, the tax shock at the time of general revaluation in 2002 would have been reduced by half. The result of this could have been a lesser rollback and therefore a stronger revenue contribution of the property tax.

There is also a significant disadvantage. Increasing all land values by the same percentage does nothing to correct for differences between assessed value and market value that arise over time as a result of differential increases in the market value of properties. Our analysis of the data for all 676,000 parcels shows that an across-the-board increase in values between general revaluations results in high-value parcels being closer to market value before the general revaluation occurs. The tax shock of the general revaluation would be least for these land owners.

An alternative to an across-the-board increase is to construct an index of land value for each parish. The simplest way of doing that is to first determine the average price per square meter of vacant parcels that were sold in a parish during a year. Taking the ratio of the price per square meter for two years would yield an index of the change in land value in the parish. The taxable value of each parcel in the parish would then be increased by this ratio. We simulated the impact of such an indexing method and found that this approach results in greater inequities in valuation than does the general indexing approach.

Allowing values to increase between general revaluations would require an act of Parliament since such increases in valuation are not allowed. The alternative would be to adjust the tax rates each year by the percentage increase in the CPI, but that would also require an act of Parliament.

### **Increase the Collection Rate**

The collection rate is quite low, 40.4 percent of 2003-04 tax liability was collected as of the end of the tax year. A goal should be set to increase the collection rate to at least the pre-2002 rate of 52.0 percent and hopefully higher, say 75 percent, within

three years. Increasing the collection rate from 40.4 percent to 60.0 percent would allow tax rates to fall by 33.3 percent while still collecting the same amount of revenue. Every 5 percentage point increase in the collection rate would generate J\$125 million in additional property tax revenue. It is unfair to those who pay their property taxes for about half of all property owners to ignore paying their taxes.

There are several steps that could be taken to increase the collection rate, some of which are more feasible than others.

- Make it easier for owners to pay property taxes. For example, rather than allow payment only at offices of Inland Revenue, provision could be made to allow for-profit collection agencies to receive payment.
- Reinstate the penalties and interest, which have not been imposed since 2001.
- Increase the interest rate that is charged on the unpaid balance. The penalty should be imposed on the unpaid balance if full payment is not made by the due date. The interest rate that is specified in legislation is 15 percent, which, given the market interest rate in Jamaica, is too low.
- Tie property tax payment to another type of payment, e.g., the water bill, and/or require proof of payment of property taxes in order to renew one's driver's license, business license, or obtain various permits. Since the compliance rate is lowest for residential and non-residential owners in the highest value class, this could be an effective tool of enforcement.
- Foreclose on property, including improvements, for which property taxes are in arrears. Once the government has foreclosed, it can sell the property and collect the taxes, penalties and interest that are owed. While such action would be expensive relative to the revenue collected, particularly for low-value parcels, once such action has been taken it provides a credible threat to other owners, and thus may not have to be exercised very often.

### **Improve the Availability of Sales Data**

Critical to the proper valuation of parcels are sales data. A general revaluation uses mass appraisal techniques, which rely heavily on the comparative sales approach to evaluating property. To implement that approach requires good data on parcel sales.

Property transfers are subject to the transfer tax, paid at the Stamp Office. For the 2002 general revaluation, the Stamp Office voluntarily provided declared sales data to LVD, however, this practice appears to have been discontinued. The Stamp Office should provide records of these transfers to the LVD. In addition, the usefulness of those data would be increased if the Stamp Office collected and recorded the land valuation number for the parcels.

## **Chapter One**

### **A Description of Property Tax Procedures**

#### **Introduction**

In 1957, Jamaica converted its property tax from one based on the capital value of land and all improvements, to one based on just the unimproved value of land, i.e., to a land value tax.<sup>3</sup> The adoption of the unimproved value of land as the base for Jamaica's property tax was based on the 1944 recommendation of the Commission on Inquiry, chaired by the Honorable Simon Bloomberg. The recommendation was subsequently endorsed by the International Bank for Reconstruction and Development, but the implementation of this change was delayed because of the absence of a legal cadastre.<sup>4</sup>

The property system that existed in 1944 was a capital-based system in which both land and improvements were subject to property taxation. However, the tax relied on self-assessment by owners; each owner was required to declare the true and correct description and value of his property (Chang 1966). The Collector of Taxes could counter-assess those parcels for which he believed the owner had not provided the true and correct value. Risdén (1979) reports that it was estimated that on average the assessed value was less than one-third of the fair market value of the property and that there was gross non-uniformity in the assessments.

Chang (1966) reports there were two major factors associated with the introduction of the land valuation legislation. First, land value taxation does not tax what a person puts into land and it discourages the withholding of land from use. Second, the existing property tax system was highly unsatisfactory. In addition, according to

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<sup>3</sup> For a discussion of land value taxation, see the papers in Bahl (1979), Holland (1970), and Andelson (2000).

<sup>4</sup> For a history of land value taxation in Jamaica see Chang (1966) and Risdén (1979). See Holland and Follain (1991) for an earlier evaluation of the Jamaican property tax.

Rosengard (1998), one of the principal objectives of this change was agrarian reform, along with a desire to shift the relative property tax burden from poor to wealthy landowners and to discourage the withholding of land from productive use. The latter point was made by Norman Manley when he presented the legislation before Parliament.

### **The Property Tax Base**

The base of the property tax is spelled out in the *Land Valuation Act* of 1956, as amended. Essentially, the tax base is the value of unimproved land. For land that has no improvements, the taxable value is the price a seller, who has a fee simple title to the land, together with license or other rights that might affect the value of land, would expect to receive in a sale that involves terms and conditions that a bona fide seller would require. When improvements are present, the taxable value is the price a bona fide seller should expect if the improvements did not exist.

The *Land Valuation Act* defines “improvements” to mean the physical additions and alterations to the land and all “works for the benefit of the land” undertaken by present or previous owners that have the effect of increasing the value of the land. However, the *Land Valuation Act* does not regard the following as improvements (*Land Valuation Act*, Part I, Section 2):

- removal of timber or vegetable growth;
- draining, filling, excavation or reclamation of the land;
- projects that are designed to prevent erosion or flooding, and;
- grading or leveling of land.

As Chang (1966) and Holland and Follain (1991) note, by excluding these changes to the land from the category of improvements, Jamaica achieved a major

simplification in tax administration since nonstructural improvements are difficult to value. Thus, by excluding consideration of the effect of these invisible improvements on land value, the task of land valuation is greatly simplified. For example, it is not necessary to determine the actual state of the land as it existed before it was cleared, which is not only difficult but a potential source of dispute with the land owner.

A land value tax refers to a tax on the value of land as if the land was devoid of all improvements, including invisible improvements such as the installation of drainage systems, the clearing of land, and so on. Unimproved value or site value taxation, as the terms are generally used, is a tax on land value that excludes any adjustment for such invisible improvements. Thus, Jamaica's property tax is a site value tax, and not strictly a land value tax.<sup>5</sup> Despite this issue, we will use the terms land value, unimproved value, and site value synonymously.

According to the *Land Valuation Act*, unimproved value does not mean value in current use. Part I, Section 2 states that the Commissioner may presume that the land may be used for any purpose, including its current or potential use, at the time the valuation is determined. The Court in Jamaica has held that in arriving at unimproved value "all the advantages which the land possessed, present or future, in the hands of the owner, may be taken into consideration; but its potentialities must be considered as possibilities and not as realized in the hands of the purchaser."<sup>6</sup>

The *Land Valuation Act* provides for new valuations every five years, but the Minister of Finance may change the period by which a new valuation is required (*Land Valuation Act*, Part I, Section 5). In actuality, revaluations have been conducted on about a nine-year cycle, with revaluations undertaken in 1974, 1983, 1993, and 2002.

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<sup>5</sup> For a discussion of these distinctions, see Oldman and Teachout (1979).

<sup>6</sup> Opinion of Mr. Justice Lewis, in the *Case of Commissioner of Valuation v. Conrad Hill*, as reported in the *Daily Gleaner*, July 27, 1963 (cited in Holland and Follain 1991).

The value of any land parcel cannot be changed between general revaluations except for the following reasons (*Land Valuation Act*, Part II, section 11, paragraph 4):

- the land is subdivided;
- two or more parcels of unoccupied land adjoining each other are valued as one, and at least one portion of land is sold or occupied;
- a public work, service, or undertaking is provided and it is the Commissioner's opinion that the value of the land has been altered;
- the land has been permanently damaged due to causes over which the owner has no control, and it is the Commissioner's opinion that the value has been altered;
- the unimproved value of the parcel has been altered by the acquisition or loss of a license or other rights or privileges that form the value of the land;
- land used exclusively for residential purposes when valued is converted for industrial use or other purposes which, in the Commissioner's opinion, alters the value of the land, or;
- in the opinion of the Commissioner that the valuation must be altered to preserve or attain uniformity in values with comparable parcels of land.

In practice, the valuation has been changed only when property is subdivided. However, consideration is being given to revaluing parcels that were recently flooded and a parcel whose valuation is thought to be substantially too low.<sup>7</sup> When there is a subdivision of a parcel the Land Valuation Division makes an inspection to determine the value of each of the subdivided parcels. The values placed on the parcels are based on land values as of the last complete valuation, i.e., the value of the parcel is backdated. Thus, if a parcel is subdivided in 2004, the newly created parcels will be revalued, but the values will be based on land sales for 2002, the date of the last full valuation. The Land Valuation Division will assign new values to the newly created parcels only if the ownership of the parcels differs from the ownership of the original parcel. The reason for

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<sup>7</sup> Adjusting for non-uniformity in valuation is referred to as maintaining the tone of the list.

that of course is to prevent a taxpayer from reducing his total property taxes by simply subdividing his parcel. Given the progressive rate tax structure, each divided parcel could be subject to a lower tax rate than the undivided parcel, thereby resulting in a lower total tax on the divided parcels than on the undivided parcel. When a parcel is subdivided, the parcel identification number for the original parcel is retired and each new subdivided parcel is assigned a new parcel number. Between March 1, 1992, and July 26, 2003, the number of parcels on the property tax roll increased by 86,438, from 604,065 to 690,503, mainly due to the subdivision of parcels.

Special treatment is provided for the valuation of bauxite lands. Bauxite and laterite are minerals vested in the Crown. The *Land Valuation Act* states that the increase in value of land that is attributable to the presence of such bauxite or laterite for the purpose of determining the unimproved value of the land is limited to the value of any royalties payable to the owner of the land (Part II, Section 7). Furthermore, the *Land Valuation Act* specifies that for purposes of property taxes the value of royalties payable to an owner of land in respect of bauxite or laterite is set at one-twentieth of the unimproved value of the land. However, that procedure no longer applies since bauxite lands are now purchased by the government, but ownership is vested in the mining company as long as the land is being mined. Thus, the mining company pays property taxes on the land. Once mining ceases, the ownership reverts back to the government. The Land Valuation Division determines the value of the bauxite land based on the value of similar land that is not being mined.

Unless the Commissioner otherwise directs, in cases where several parcels of adjoining land are owned by the same person and, if let, are let to one person, the parcels are valued as a group. Similarly, unless the Commissioner directs otherwise, separate valuations for adjoining parcels are allowed under the following conditions:

- if there are buildings which are obviously adapted to separate occupation and which could respectively be held under separate ownerships;
- the parcels are separately let to different persons.

### **Valuation of Land**

Valuation of land is the responsibility of the Land Valuation Division (LVD) of the National Land Agency (NLA). For the 2002 revaluation, approximately 676,702 parcels were valued; this is an increase from the 595,510 parcels that existed in 1991. The increase is due mainly to the division of parcels; about 50 percent to 60 percent of the increase is due to the expansion of Portmore, a town in the parish of St. Catherine. In June 2000, the value of the property tax base was J\$86 billion.<sup>8</sup> In 2002, the property tax base was J\$522.4 billion, which represents a 6.1-fold increase.

According to Rosengard (1998) the valuation roll appears to be virtually comprehensive. Officials in the LVD concur, and believe the property tax roll contains better than 90 percent of all the land parcels in Jamaica.

The budget for the 2002 revaluation was J\$82.0 million.<sup>9</sup> However, this is the amount over and above the normal budget of the Land Valuation Division and includes only overtime, temporary employees, and consultants. According to officials with the Land Valuation Division, the full cost of the revaluation would be closer to J\$110 to J\$115 million.

The valuation staff appears to be well trained. The staff have appropriate training in land valuation methods and several have advanced degrees.

For the 2002 revaluation, the calculations of value were done manually since the computer software necessary to automate the calculation was not yet available. The reported explanation for the software not being available was that the system

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<sup>8</sup>McCluskey (2002, p. 14).

<sup>9</sup> McCluskey (2002); McCluskey provides an extensive evaluation of the revaluation process.

requirements and business rules were not defined in a timely fashion. Because the valuations were done by hand, the revaluation required substantial data entry and verification. Most of the valuations were completed without a specific field visit. While a cadastral map exists, it has not been fully computerized; it is expected that the map will be computerized by June 2004.

The LVD relied on four basic data sources to conduct the 2002 valuation:

- Its own data held on the Land Valuation System database;
- Data held by Surveys and Titles (both are divisions of NLA);
- Transaction data from the Stamp Office;
- Market transactions obtained from practitioners.

The valuation roll and tax roll information are managed by Fiscal Services, but the data are supplied (owned) by the Land Valuation Division.

The availability of data on arms length sales of unimproved property is critical to producing accurate valuations. There are several sources of sales data that LVD relied on to conduct the 2002 valuation. First, there are the sales reported to the Stamp Office. All transfers of real property are subject to the stamp tax and the property transfer tax. These taxes are paid at the Stamp Office. It is generally acknowledged that as a result of informal transfers of property a substantial but unknown percentage of transfers avoid these taxes. Furthermore, because the stamp duty and the property transfer tax depend on the reported price paid for the property, there is concern that sales prices are understated to the Stamp Office.<sup>10</sup>

The LVD obtains from the Stamp Office the declared sales value of each property transaction. Sales data are not public information and the Stamp Office is not required to

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<sup>10</sup> The property transfer tax applies to the market value of property, not the price the property sold for. It is possible that the declared sales price does not reflect full market value. If the Stamp Office suspects that the declared sales price is below the market price, they do an appraisal and will use the appraised value as the basis for the property transfer tax. However, LVD does not obtain the upgraded value, only the originally reported value.

supply it to the Land Valuation Division.

The Titles Office also provides sales data to the LVD. Jamaica has a procedure under which the title to real property is registered; a registered title provides a guarantee to the title. Registration involves a significant process to ensure that title is legally held by the individual claiming to hold title. Such registered titling is done by the Titles Office of the Land Division.

Once the Titles Office registers a property, it sends the information to LVD. The problem with these sales data is that the date of the registration does not match the date of property transfer since the Titles Office may take several months to complete the registration process or the buyer may wait to register the title. To register property, there must be evidence that the property transfer tax has been paid. Thus, all of the sales reported to LVD by the Titles Office should duplicate sales provided by the Stamp Office. According to McCluskey and Franzen (2001), approximately only 50 percent of the land is registered and has appropriate title, although Pearl Piccott, director of Land Valuation, believes the percentage is now closer to 60 percent (interview, 2004).

The transfer of deeds to non-registered real property can be recorded at the Island Records Office. Some properties are transferred informally, with no registration of title or recording of deeds. This informal transfer of property typically involves the exchange of rural property between relatives or close friends.

McCluskey (2002) noted that there is limited quality control and verification of the data collected. Furthermore, there appears to be a considerable number of parcels in “informal” settlements that are exchanged without the government’s knowledge.

One of the difficulties in the valuation process is matching the parcels from the Stamp Office to the property tax roll. The Stamp Office does not require that the valuation number of a parcel be reported. The Stamp Office uses its own numbering system, with each transfer getting a unique identification number. LVD has to match the

sold parcel with the equivalent parcel in the property tax roll and has to do that by attempting to match the owner's name and the parcel's address.

Subsequent to the general revaluation the Land Valuation Division was able to identify 1,100 sales of unimproved parcels. These data, obtained from the Stamp Office, were used in the valuation process. These were not necessarily the only sales obtained from the Stamp Office that were used. Over time, the number of sales of unimproved parcels has declined, and in the urbanized areas the lack of such parcels is becoming a problem. More than one year of sales data was used in the recent valuation process.

LVD must determine whether the reported sales price reflects a fair market, arms length sale between a willing buyer and a willing seller. So the first step is to cull the sales files for sales that do not meet this requirement.

In making the valuation of a parcel, LVD takes into consideration the land area, location, use, zoning, development potential, topography, and land capabilities of the parcel, the availability of administrative and community services, as well as the sales price of unimproved land in the area.<sup>11</sup> However, there appears to be a large percentage of parcels for which the use is not known. LVD uses these factors to identify homogeneous neighborhoods on which to determine market value for vacant parcels of differing size. These values are then applied to all of the parcels in that neighborhood, essentially using a comparative sales approach based on average prices in the neighborhood. Sometimes LVD must compare the market value of improved property across neighborhoods in order to determine the relative value of land in a neighborhood that has no vacant land sales.

No sales ratio study (see Box 1) is conducted subsequent to the revaluation. Thus, there is no formal measure of the overall quality of the assessments. However, in reviewing objections, the valuations are revisited, and frequently a site visit is made.

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<sup>11</sup> The valuation process is described in National Land Agency (2002).

This process provides an opportunity to judge the accuracy of the valuations of those parcels. However, parcels for which there are objections are certainly not a random sample of parcels; it should be expected that objections are more likely for parcels that the owners believe are over valued. Officials in the LVD believe that the values are generally within plus or minus 10 percent of market value.

### **Objections to Assessed Values**

Once the valuation process is complete, owners are notified of the valuation of their land. When the land value system was first put in place, the notice of valuation served as a certificate of title for owners; it is reported that many land owners still associate paying property taxes with protection of their ownership rights.

#### **Box 1. Sales Ratio Study**

A commonly used technique to measure the degree of accuracy of assessed is a sales ratio study. To conduct such a study, sales prices are collected for properties that have been sold since the assessments were made. The ratio of the observed sales price to the assessed value is calculated for each parcel that was sold, except that sales that do not reflect an arms' length transaction between a willing buyer and a willing seller are dropped from the study. The distribution of the ratios is then studied to determine the degree to which the assessed value closely matches the market value of the parcel.

Owners have the right to object to the assessed value. The procedures for objections are laid out in Part III of the *Land Valuation Act*.

The owner has 60 days after service of the notice of valuation in which to file an objection with the Commissioner of Valuations. An objection must be made in writing on the prescribed form and must state the grounds upon which the owner objects. The grounds for objection are limited to the following:

- the value assessed is too high or too low;
- lands which should be included in one valuation have been valued separately;
- lands which should be valued separately have been included in one valuation;
- the person named in the notice is not the owner of the land.

Most objections are based on the assessed value. If that is the basis of the objection, the landowner must declare an alternative value. Filing an objection gives the taxpayer the right to a reduced tax liability pending the settlement of the objection.

The LVD investigates the claim, and tries to meet with the objector. A recommendation is provided to the Commissioner who considers the objection and provides written notice of the decision. The Commissioner may either disallow the objection or allow it either wholly or in part.

If the individual is dissatisfied with the decision of the Commissioner, the owner may, within 60 days, appeal that decision to the Revenue Court. This, in practice, has been a highly unusual step; LVD reports that so far only four or five cases have gone to this step. The grounds for appeal have to be the same as stated in the objection unless the Revenue Court permits the ground of appeal to be amended.

If an appeal is made to the Revenue Court, the individual must make a deposit, potentially recoverable after the Court's decision, with the Commissioner of Inland Revenue as a security for the due prosecution of the appeal. This discourages frivolous

objections. The objector must pay the Land Valuation Division's attorneys' costs if his objection is not upheld; if it is upheld, the Land Valuation Division must pay the objector's legal costs.

If the Commissioner or any person affected by the decision of the Revenue Court is dissatisfied with the decision of the Revenue Court, that person has 60 days from the date of the decision to appeal to the Court of Appeal.

When an individual objects or appeals the assessed value, he is required to pay taxes based on at least 75 percent of the assessed value, or the value declared by the owner if that value is greater. If the valuation is altered as a result of the objection, any excess property tax that was paid is refunded or any underpayment must be paid. Interest is charged at an annual rate of 8 per cent on the amount of underpaid tax calculated from the collection date until the date of payment.

For the 2002 revaluation, 6,067 appeals were filed, or less than one percent of the total number of parcels. As of February 17, 2004, 1,145 appeals have been settled, of which 540 were disallowed and 141 were allowed in full. About 18.6 percent of the objections were filed in parish of St. Andrew.

Holland and Follain (1991) report that after the 1974 valuation objections were made on about 9 percent of all properties. Of the 45,000 objections, about 15,000 were on sites valued at under J\$2,000, subject to the minimum tax of J\$5. But the 30,000 objections on sites valued at J\$2,000 or more were concentrated in the more developed and urban parishes, reaching as high as 16 percent of all sites in the Corporate Area (Kingston and St. Andrew). Moreover, two years after the introduction of the new valuation roll, less than one-third of the objections had been settled. The difference in the

volume of objections between 2002 and 1974 suggest that the 2002 valuations were less likely to overstate market value.

**Tax Rate Structure**

Jamaica uses a progressive property tax rate structure. The rate structure adopted in 1993 is presented in Table 1. These rates remained in effect until 2002. With the 2002 revaluation, property tax rates were changed, in particular adjusted downward to mitigate the increase in property taxes that would have been realized with the new values. The new structure maintains the progressive nature of the previous rate structure. The rate structure adopted in 2002 is shown in Table 2.

**Table 1: Property Tax Rate Schedule as of April 1993**

Values (in J\$)	Property Tax Rates (in J\$)
Up to 20,000	50
20,001 to 50,000	50 + 0.1% of the value exceeding 20,000
50,001 to 100,000	80 + 0.3% of the value exceeding 50,000
100,001 to 500,000	230 + 0.75% of the value exceeding 100,000
500,001 to 1,000,000	3,230 + 1.50% of the value exceeding 500,000
1,000,001 to 2,500,000	10,730 + 2.00% of the value exceeding 1,000,000
2,500,001 to 5,000,000	40,730 + 2.50% of the value exceeding 2,500,000
Over 5,000,000	103,230 + 3.00% of the value exceeding 5,000,000

**Table 2: Property Tax Rate Schedule as of March 2002**  
(in J\$)

Values	Tax Rate
Up to 200,000	600
200,001 to J\$1,000,000	600 + 0.3% of the value over 200,000
1,000,0001 to 2,500,000	3,000 + 0.5% of the value over 1,000,000
Over 2,500,000	10,500 + 1.75% of the value over 2,500,000

Before this rate structure was implemented it was modified by limiting the amount of property taxes that had to be paid. Eleven property value categories were specified and caps on the amount of property tax to be paid were specified for each value category. Table 3 shows the caps that apply for each value class. For example, the maximum tax paid by a property owner in the J\$10 million to J\$50 million bracket is J\$320,000 (up from J\$170,000 in 2002). The cap for parcel values over J\$200 million was increased from J\$3 million in 2002 to J\$4 million. The caps were to be imposed for one year. However, they were extended to at least a second and third year.

**Table 3: Property Tax Caps**

Values (in J\$)	Cap (in J\$)
Up to 200,000	600
200,001 to 300,000	800
300,001 to 400,000	1,100
400,001 to 500,000	1,500
500,001 to 1,000,000	1,700
1,000,001 to 2,500,000	4,000
2,500,001 to 5,000,000	11,000
5,000,001 to 10,000,000	87,000
10,000,001 to 50,000,000	320,000
50,000,001 to 200,000,000	1,500,000
Over 200,000,000	4,000,000

### **Derating, Relief, and Exemptions**

The Land Taxation (Relief) Law of 1959 provides for derating and for relief of land taxes. The Land Taxation Law established the Land Taxation (Relief) Board, which is made up of the Commissioner of Inland Revenue, the Commissioner of Land Valuations, and four other members appointed by the Minister of Finance. The Board does not have authority to change the valuation of the property, but it may reduce the tax liability. In addition, the Minister of Finance can provide discretionary relief.

### **A. Derating**

The Land Taxation (Relief) Board can reduce property taxes by derating property. Derating of property essentially results in the property being subject to a lower tax rate. The Land Taxation (Relief) (Agricultural Land) Derating order of 1993 authorized the derating of land which is used exclusively or principally for bona fide<sup>12</sup> agricultural production. The derating is set at 50 percent of the total land taxes, but subject to a minimum land tax of J\$600.

Subject to the eligibility conditions for derating, any person liable to pay property tax may apply to the Board for a derating certificate. The only eligibility condition is that the land is used for agricultural production. There is no restriction on the size or value of the parcel eligible for derating, nor are the characteristics of the owner, for example, income or age, considered.

An application for a derating certificate is sent to the Land Valuation Office, which, after an investigation, reports back to the Board with a recommendation. The Board then decides whether or not to grant derating relief. In practice, if the Land Valuation Office's investigation finds that the property is used for bona fide agricultural production, the Board grants the derating.

If an applicant disagrees with the Board's decision, he may appeal to the Minister of Finance. The decision of the Minister is final and may not be appealed.

The derating certificate is granted for a period of one to three years at the discretion of the Board, but three years is the typical period. However, the Board can grant a new certificate upon the expiration of a previous derating certificate, although the owner must file a new application.

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<sup>12</sup> Bona fide means to make in good faith without fraud or deceit.

## **B. Relief**

There are two types of relief: statutory and discretionary.

### **1. Statutory Relief**

Statutory property tax relief is provided through the Land Taxation (Relief) Board. Any person liable to pay land tax may apply to the Board for a relief certificate.

Relief can be granted if:

- the land is used as agricultural land and the valuation takes into account the potential use of the land for purposes other than agriculture;
- the land contains a private dwelling-house and the valuation of the land takes into account the potential for developments such as a hotel or guest-house, a block of residential flats, or a commercial or industrial building, or;
- the land is owned by private member's clubs, registered as such under the *Registration of Clubs Act*, and the land is used as playing fields for cricket, football and other outdoor games.

Essentially, statutory relief means that agricultural and residential land will be valued in terms of its current use rather than highest and best use, i.e., land used for homes and agriculture are not valued based on its potential for hotel, commercial, industrial, or multiple-residence uses. No relief is provided for vacant land or for land in industrial or commercial use.

Requests for relief have to be in writing using a form contained in the legislation and are brought before the Land Taxation (Relief) Board. Each application is investigated by the Land Valuation Division to determine what the land value would be if the development potential is ignored. Relief does not depend on the characteristics of the owner or the size or value of the parcel.

A relief certificate is not transferable and is void as soon as:

- the person to whom it is granted dies; or

- the land to which it relates or any part thereof is sold, exchanged or given away or leased, licensed or otherwise disposed of on terms whereby the land (or part thereof) may be used for any purpose other than the purpose for which it was being used at the time the application for a relief certificate was made.

Relief is not automatically extended to heirs, though they may apply for it. A relief certificate continues in force until a new valuation roll (or a change in the valuation roll) comes into force.

## **2. Discretionary Relief**

The Minister of Finance may provide discretionary relief from the whole or any part of the property tax if he is satisfied that it would be just and equitable to do so. Applications have to be in writing and notice of such relief must be published in the *Gazette* as specified under Section 14 of the *Property Tax Act*. The relief is only for the current year, but the owner can apply each year.

Provision for relief was originally intended for pensioners on a fixed income, although there have been some cases of relief for people who have inherited land they cannot afford to develop. The use of discretionary relief has expanded more broadly to low-income families. Until recently, the Minister of Finance's office would accept applications, investigate the situation, and make a determination of the amount of relief to grant. Most of the applications were approved.

Currently, however, applications are sent either directly, or through the Ministry of Finance office, to the Parish Council of the parish in which the property is located. A parish committee investigates the situation to determine the income of the family, making sure that there is not an income earner in the family. The Parish Council then makes a recommendation regarding the level of relief to the Minister of Finance. The Minister of

Finance routinely approves the recommendation of the Parish Council.

The Ministry of Finance has provided guidelines to the Ministry of Local Government regarding discretionary relief. Among other factors, the guidelines specify that the relief is for widows, widowers and pensioners, or others that are unable to pay, but not “ordinary persons”. The applicant must prove that there are no outstanding property tax arrears.

### **C. Exempt Properties**

Property in certain types of uses is exempt from land taxes. These include:

- all building amount held in trust exclusively for public religious worship or for religious worship and for use as schoolrooms, together with the lands immediately attached to them used as churchyards or burial grounds;
- all buildings and lands used solely for charitable or educational purposes and supported solely by charitable or missionary funds;
- all buildings and lands belonging to and used by the University of the West Indies;
- all buildings and lands belonging to Primary Schools, inspected by an officer designated by the Minister responsible for education, or to Agricultural Industrial or Vocational Schools approved by the Minister, or to the endowed schools specified in the Second Schedule;
- all buildings and lands, belonging to Secondary Schools receiving any payment out of the Consolidated Fund;
- all buildings and lands, belonging to Secondary Schools, Commercial Schools or Preparatory Schools with not less than twelve scholars, in average attendance, each such Secondary, Commercial or Preparatory School being certified by an officer designated by the Minister responsible for education to be efficient;
- all unoccupied property belonging to, and all property belonging to and in the actual occupation of, the Crown, the Government of this Island, or any Parish Council, or the Kingston and St. Andrew Corporation;
- all freehold property vested in the Commissioner of Lands and in the actual occupation of the Crown, the Government of this Island, a Parish Council, the

Kingston and St. Andrew Corporation or the holder of a public office by virtue of his employment;

- all buildings and lands belonging to and used by the Council of Legal Education;
- all buildings, belonging to any church, which are used as church rectories, caretaker cottages or church halls, together with the lands immediately attached to them and belonging to such church, so, however, that the area of land so exempt in each case shall not exceed one acre;
- all buildings and lands belonging to, and used solely for the purposes of, any private hospital approved by the Minister;
- all buildings and lands, belonging to any social, charitable or cultural organization approved by the Minister and used solely for the purposes of such organization.

In 2003, there were 9,944 parcels that were exempt, amounting to J\$26.8 billion in property value.

### **Tax Collection**

Once the valuation roll has been prepared, it is transmitted to Inland Revenue. Inland Revenue prepares the tax assessment notices, stating the property tax due. These notices, which are supposed to be sent out by the end of March, are distributed, either by mail or field agents, by the 28 local collectorates. It was reported that in 2003, 200,000 of the tax bills were returned as undeliverable, probably due to incorrect addresses of the owners. Since 2001, the taxpayer has been able to make payment to any collectorate or service center, not just to the one in which the property is located. Payment can be either sent by certified mail or paid in-person, the latter being the more common method. Property taxes can be paid in their entirety, semi-annually, or quarterly.

*The Property Tax Act* allows for property tax collection by mortgagees, an option exercised by several housing finance institutions. The mortgagee includes the property tax liability in the monthly mortgage payment, and turns the property tax payments over

to the Collector on a quarterly basis.

If the land tax is not paid within two to three months of due date, the taxpayer is first reminded by letter or phone call. In this regard, Inland Revenue focuses its efforts on taxpayers with larger tax bills. A substantial percentage of the taxpayers respond as a result of the letter.

*The Property Tax Act* calls for penalty and interest on property tax arrears (Section 6). If the owner does not pay by the end of April, the legislation calls for a penalty of 10 percent of the amount due. If a partial payment is made, no penalty is imposed. In addition, interest equal to 15 percent per annum is charged on the unpaid taxes, although the Minister of Finance may set a different rate. The Commissioner of Inland Revenue may remit any or all of the interest for reasons that appear to him/her to be sufficient. It was reported that for 2002 and 2003 tax liabilities, penalty and interest for late payment were waived.

If, within a reasonable period thereafter the tax has still not been paid, a revenue field officer can be sent out with a levy warrant.<sup>13</sup> This warrant allows the agent to either collect the property tax due or, failing that, attach the property owner's personal property, i.e., take the owner's personal property in lieu of payment. While property can be attached as payment of taxes, this is considered an extreme action, is legally cumbersome, and is not used at this time. In fact, in the past, some cases never got beyond the field officer's visit because the property owner could not be found.

If the field officer cannot collect the property tax due, a summons can be issued by the Collector General. Inland Revenue officials report that 50 to 100 summonses are issued each month within each collectorate for the 11 months the courts are in session. The summons must be delivered to the owner, but it is frequently difficult to locate the owner. The summons requires the landowner to appear in court, at which time the judge

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<sup>13</sup> Collection procedures for property taxes are laid out in the *Tax Collection Act*.

will order him to pay the tax within 30 days. The order issued by some judges includes incarceration if the taxes are not paid, but most judges do not issue such an order. Most cases do not get as far as the court, and if they do, the landowner generally arranges to pay prior to appearing before the judge.

In a few cases landowners will refuse to pay the tax even when ordered to do so by the Court. However, it appears that no taxpayers have been jailed or had other property attached for non-payment of taxes. *The Property Tax Act* provides for the enforcement of the property tax under the procedures provided for in the *Tax Collection Act*. However, the *Tax Collection Act* is silent with respect to the forfeiture of real property for non-payment of property taxes. Such forfeiture is provided for under the Quit Rents Law, but that law does not reference property taxation. Thus, it is unclear whether the government can foreclose on real property. In any event, this enforcement weapon has not been used in recent times.

In order to register property with the Titles Office, the owner must obtain a tax clearance certificate from Inland Revenue stating that all taxes have been paid. (This requirement does not apply to other property transfers.). To get such a certificate the owner must have paid any back property taxes. However, only the last seven years of property tax liabilities have to be paid since under the statute of limitations tax obligations cease at the end of seven years.

Land tax payments are posted in the tax ledger. A list of property taxes in arrears is prepared in each collectorate and submitted periodically to the Collector General's Office. Collection rates are low. For the 2001-02 financial year 52.0 percent of that year's tax liability taxes was collected during that year. As of April 29, 2004, 65.4 percent of the 2001-02 tax liability was collected. For 2002-03, 25.5 percent of that year's tax liability was collected during that year, while 46.7 percent of the liability was collected as of April 29, 2004. For 2003-04, 40.0 percent of that year's tax liability was

collected during that year, while 42.0 percent of the liability was collected as of April 29, 2004. It is clear that after the revaluation, the collection rate fell dramatically in the first year, but even in the second year after the revaluation, the collection rate was still well below the collection rate for 2001-02.

## **Chapter Two**

### **Issues Associated with the Property Tax**

#### **Property Tax Collections**

According to government sources, property tax collections in 2002-03, the first year under the new property tax rate structure were J\$924.0 million, and in 2003-04, collections were J\$1,489.7 million. For 2002-03, this is about 1.0 percent of total tax revenue and 0.23 percent of Gross Domestic Product (GDP).

The historic pattern of property tax collections is shown in Table 4. Column 1 shows annual property tax revenue. The property tax base does not increase year-to-year as a result of increases in the market value of property, nor have there been changes in tax rates between valuations. These institutional arrangements limit the potential growth in property tax revenue between general revaluations. Between general revaluations property tax revenue could increase as a result of the subdivision of parcels, parcels being added to the tax roll (e.g., a previously untaxed parcel is identified), exempt property becomes nonexempt, or changes in relief or derating of parcels. But, even when land is subdivided the values applied to the subdivided parcels are based on market values that existed at the date of the previous valuation. Most of the year-to-year changes in property tax revenue are due to changes in the collection rate, including late payments for obligations for previous years. For example, between 1999-00 and 2000-01, annual property tax collections increased from J\$577 million to J\$644 million. However, tax obligations increased by less than J\$7 million. Between 2000-01 and 2001-02, property tax collections increased from J\$644 million to J\$677, while tax obligations decreased by

over J\$15 million. (See below for a discussion of collection rates.)

**Table 4: Property Tax Collections**

Financial Year	Property Tax Collections (in millions of J\$)	Property Taxes per Capita (current dollars)	Property Taxes per Capita (constant dollars)	Property Taxes as a Percent of GDP
1997-98	524.7	206.0	294.0	0.20
1998-99	512.9	199.8	264.3	0.18
1999-00	577.3	223.6	277.0	0.19
2000-01	644.4	248.1	286.7	0.19
2001-02	677.9	259.5	278.4	0.18
2002-03 <sup>a</sup>	924.0	352.1	352.1	0.23
2003-04	1,489.7	NA	NA	NA

Source: Property Tax Revenue: Inland Revenue Department; Population: Statistical Institute of Jamaica; Inflation and GDP: Statistical Digest, December 2003, Statistical Institute of Jamaica.

NA: not available

a. New property tax rates became effective April 2002.

Columns 2 and 3 of Table 4 present property taxes per capita in nominal and real terms. For 2002-03, property taxes per capita were J\$352.06. (In real per capita terms, this is less than the amount collected in 1994-95.) For the period 1997-98 through 2002-03, nominal property taxes per capita increased 11.3 percent per year, while in real terms they increased 3.7 percent per year.

Over the past decade, the increase in property tax revenues has barely kept pace with the growth in GDP. Column 4 shows property taxes as a share of GDP. The share of GDP increased from about 0.19 percent before 2002 to 0.23 percent after the implementation of the 2002 valuations. (After the general revaluation in 1993, property taxes as a share of GDP rose as high as 0.28 percent.). All of this suggests that property

taxes in Jamaica are low (see the next section for a comparison with other countries) and between revaluations do not increase with the growth of the economy.

Because of the institutional structure of the property tax, in particular because there are no general increases in assessed value between valuations, a calculation of an income elasticity of property tax revenue is not particularly meaningful.<sup>14</sup> Instead, we report an elasticity of the property tax base. We divided the percentage change in the property tax base between 1993 and 2002 by the percentage change in GDP between 1992 and 2001. The resulting elasticity is 1.32. The implication is that the potential growth in property taxes as a result of the growth in the economy is quite large.

### **International Comparisons<sup>15</sup>**

A question to be answered is whether Jamaica uses the property tax as intensively as do other countries. The amounts reported for Jamaica in Table 4 seem small, but in reality the property tax is not a major source of revenue in very many places. There are a few outliers. For example, in the United States the property tax constitutes 9 percent of total government revenue and in Canada it is 10 percent. We compare the ratio of property tax revenue to total tax revenue for all countries for which data are available for the 1970s, 1980s and 1990s and show the results in Table 5. These statistics show that the relative reliance on the property tax in Jamaica has declined significantly over the past three decades. It fell from an average of 3.11 percent of total taxes in the 1970s to 0.66 percent in the 1990s. It is also the case that Jamaica's reliance on the property tax was above the developing country average in the 1970's, but is now well below the

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<sup>14</sup> An income elasticity equals the percentage change in revenue divided by the percentage change in income, or in this case GDP.

<sup>15</sup> This section was prepared with the assistance of Roy Bahl.

average. From these data, we can say that Jamaica now uses the property tax less intensively than do other developing countries.

Another standard for cross-country comparison is property tax revenue as a percent of GDP. This calculation makes an adjustment for income level and allows comparison of Jamaican property tax burdens with that in other countries, even higher income industrialized countries. We present such a comparison in the right side panel in Table 5. In the 1990s, the latest years for which comparative data are available, property tax revenues in Jamaica averaged only about 0.16 percent of GDP. By comparison with other countries in the sample, this is low. It is quite a contrast with the 1970s, when the share of property tax in GDP in Jamaica was about equal to the international average and well above that in developing countries.

The pattern seems clear. But the explanation of this pattern is less clear. Jamaica has either moved away from reliance on the property tax as a matter of policy choice, or it has allowed the revenue take to erode by neglecting the administration of the tax. As we will show in this paper, both factors have contributed.

**Table 5: Subnational Property Taxes**

	Property Tax as a Share of Total Tax <sup>a</sup>			Property Tax as a Share of GDP <sup>a</sup>		
	1970s	1980s	1990s	1970s	1980s	1990s
OECD countries	4.09	3.96	4.22	1.24	1.31	1.44
Number of countries	16	18	15	16	18	16
Developing countries	2.30	1.66	2.06	0.42	0.36	0.42
Number of countries	16	21	19	20	27	23
Transition countries	3.08	1.65	2.06	0.34	0.59	0.54
Number of countries	1	4	19	1	4	20
All the countries	3.19	2.62	2.72	0.77	0.73	0.75
Number of countries	33	43	52	37	49	58
Jamaica <sup>b</sup>	3.11	1.49	0.66	0.78	0.39	0.16

Source: International Monetary Fund (2001), *Government Finance Statistics Yearbook*, Washington, DC: International Monetary Fund.

Jamaica data are for the 1990s are from the Government of Jamaica sources.

<sup>a</sup> Average of whatever data are available for the period.

<sup>b</sup> Jamaica data are averages for the periods 1975-1979, 1980-1985, and 1990-1999.

In reality, the capacity to collect property taxes is related to more than just GDP. Another method of international comparison is to adjust for all factors that might give one country an advantage over another in raising property tax revenues in order to calculate “potential” property tax revenue. By comparing actual property tax revenue to estimated potential property tax revenue we may calculate indexes of tax effort for the countries in our sample. We carry out such an analysis here, using data from the 1990s.<sup>16</sup> The first step in calculating these property tax effort indexes is to estimate a regression equation to explain inter-country variations in the ratio of property tax revenue to GDP, i.e., in property tax capacity. One explanatory variable is per capita GDP in US\$, for

<sup>16</sup> The sample is limited because data for property tax or data for the independent variables used are not available for all countries.

which a positive relationship is expected. Higher income countries in general have more capacity to tax and a tax administration that is better able to capture taxable capacity. In fact, we would expect that the *ratio* of tax to GDP will be higher in countries where per capita GDP is higher. The rate of urbanization is expected to have a positive effect on property tax revenue because the property tax is essentially an urban-based tax and because the agricultural sector tends to be either exempt or one of the hard-to-tax sectors of economies in developing countries (Bird and Wallace, forthcoming). Population size is used as an independent variable to adjust for the size of a country.

The results of this estimation are presented in Table 6. For the period 1994-1996, for which we could obtain data for a sample of 48 countries, we find a strong association between the property tax share of GDP and the explanatory variables. The signs of the coefficients are as hypothesized, and all three independent variables are statistically significant. For the year 2000, where the sample is smaller due to data limitations, only per capita GDP is significant, and the overall fit is not as strong. We can say that higher income countries have a significantly stronger capacity to tax real property.

**Table 6: Linear Regression of the Ratio of Property Tax Revenue<sup>a</sup>**

	1994-1996	2000
Intercept	-13.04674 (-4.75)	-6.4256 (-1.03)
Per Capita GDP (in US\$)	0.38223 (2.79)	-.87010 (2.67)
Percent of Population Living in Urban Areas	1.38507 (2.28)	-0.00129 (0.00)
Population Size	0.20450 (2.14)	-0.9636 (-0.34)
Adjusted R <sup>2</sup>	0.4283	0.1777
N	48	32

Source: Computed from data taken from International Monetary Fund (2001), *Government Finance Statistics Yearbook*, Washington, DC: International Monetary Fund; and World Bank (2003), *World Development Indicators*, Washington, DC: World Bank.

<sup>a</sup>. All variables expressed in logarithms, t-values in parenthesis.

What can this cross-country pattern tell us about Jamaica? We use these equations to estimate an “expected” level of property tax for Jamaica. For the period 1994-1996, we would expect a country with Jamaica’s population size, income level, and rate of urbanization to raise approximately 0.33 percent of GDP in property tax revenue. In fact, Jamaica actually raised 0.19 percent of GDP in property tax revenues during this period. Jamaica’s tax effort index (the actual property tax revenue divided by the estimated revenue) was 0.58785 (see Column 1 of Table 7). Jamaica’s property tax effort is about 42 percent below the international average. For 2000, Jamaica would have been expected to raise 0.24 percent of GDP in property tax but it actually raised 0.18 percent of GDP. Jamaica’s tax effort index was 0.69, or about 31 percent below the international average.<sup>17</sup>

**Table 7: Indices of Property Tax Effort**

Country	1994-1996	Country	2000
Albania	0.00599	Ukraine	0.00070
Mongolia	0.07322	Kyrgyz Republic	0.00588
Austria	0.14249	Denmark	0.39728
Botswana	0.33432	Mongolia	0.42488
Azerbaijan	0.35152	Czech Republic	0.48165
Netherlands	0.37006	Slovenia	0.59108
Ireland	0.39263	Switzerland	0.63461
Czech Republic	0.43022	<b>Jamaica</b>	<b>0.68617</b>
Norway	0.55722	Croatia	0.71135

<sup>17</sup> The results presented in Table 6 might be questioned, for two reasons. The samples are small and do not include many developing countries, and relatively little of the variation can be explained (particularly in the latter year studied). We can do little about the first issue, because data are simply not available. With respect to the second, we can pool these data for the period 1972-2000 in an (unbalanced) panel of 28 countries for which data were available. We used three independent variables: the agricultural share of GDP (A), for which we expect a negative coefficient; the rate of urbanization (U), for which we expect a positive coefficient; and population size (P). As may be seen from results below, all three variables are significant, income and urbanization have the expected sign, and we explain about three-fourths of the variation among these countries for this period. We use this equation to predict property tax effort for Jamaica, as above, and reach the same conclusion: that Jamaica uses the property tax far less intensively than do other countries with similar economic structures. The estimating equation is:

$$PT/GDP = -0.28A + 2.69U - 1.78P$$

(2.41) (5.86) (4.63)

$$\overline{R^2} = 0.76$$

Country	1994-1996	Country	2000
Mexico	0.56853	Mexico	0.92336
<b>Jamaica</b>	<b>0.58785</b>	Hungary	0.97803
Denmark	0.60026	Slovak Republic	0.97963
Hungary	0.61117	Estonia	0.98120
Germany	0.65798	Thailand	1.18871
Estonia	0.68385	New Zealand	1.20796
Brazil	0.70683	Chile	1.66824
Bulgaria	0.74335	United States	1.67064
Croatia	0.74900	Argentina	1.85614
Iceland	0.75290	Israel	1.88284
Slovenia	0.77910	Bulgaria	2.07354
Chile	0.83865	Lithuania	2.44774
United Kingdom	0.94917	Canada	2.51122
Malaysia	0.96120	Bolivia	3.28166
Argentina	0.99966	South Africa	3.46745
Slovak Republic	1.07270	Latvia	3.55460
Portugal	1.07333	Poland	3.71083
Belarus	1.11321	Romania	3.88126
Bolivia	1.15884	Russian Federation	5.67016
France	1.15940	Kazakhstan	6.78261
Lithuania	1.22057	Belarus	6.92570
Kyrgyz Republic	1.22226		
Thailand	1.24160		
India	1.25469		
Switzerland	1.31546		
New Zealand	1.35655		
Romania	1.43730		
Spain	1.60074		
Israel	1.66483		
China	1.73133		
Australia	1.79746		
United States	2.08797		
Russian Federation	2.44531		
Poland	2.58802		
South Africa	2.76195		
Latvia	2.80106		
Georgia	2.85501		
Canada	3.37269		
Kenya	4.22232		
Moldova	6.95512		

Cross-country comparisons are not normative guidelines, but they can give some notion of the dimensions of under- or over- taxation in comparison to other countries.

For example, if in the year 2002, Jamaica were to increase its property tax effort to a level that would bring it to the international average, the increase would be about J\$247

million, or about 45 percent over the existing level. The property tax would rise to nearly one percent of total tax revenues. By these international standards, one might argue that there is significant room for property tax increase. Restoring the property tax to its historic levels relative to GDP, i.e., 0.78 percent would imply an increase in property taxes equal to 271 percent of 2003-03 revenues.

How does the Jamaica property structure compare to those in other countries? There is so much variation across countries in how the property tax is structured that this is a hard question to answer. Most countries tax land plus improvements, but several do tax just land. Most use market value as the basis of the tax, but many use rental value and several use area. Property taxes are generally used to finance local governments, but in the majority of countries the tax rates are set or controlled by the central government. Valuation of property is done both centrally and at the local level. List of property that is exempt from property tax is pretty uniform across countries. In many countries the structure is more complex than in Jamaica, with provisions for differential tax rates by type of property, alternative basis for valuing property, and special exemptions.

In most countries the tax rates do not vary with the value of the parcel. It is very difficult to make meaningful comparisons about tax rates across countries. Comparisons between a country that uses a capital value system and a country that uses a land value system is not meaningful. Furthermore, the nominal tax rate may not be meaningful because of differences in exemptions or in the basis for determining taxable value. For example, Bird and Slack (forthcoming) cite a study that reports that in the Philippines the nominal rate is 2 percent while the effective rate is estimated to be 0.07 percent. Finally, there is no place in which the rates are published, a particular problem when the tax rates

are set by local government. However, McCluskey (1999) provides some information that allows some comparison of tax rates between Jamaica and other countries that use a land value system. In Australia a flat rate is set by each state government, but the rate varies by property use; for non-residential property in New South Wales the rate is 1.7 percent. In Estonia, where local governments set the rates, the rates vary from 0.5 percent to 2 percent. In Kenya, Nairobi has a rate of 14 percent, although the typical rate in the rest of the country is 6 percent. In New Zealand, multiple rates are set by local governments. In Palmenton, North City the rates range from 0.4 percent to 3.18 percent. In South Africa, where local governments have a choice of tax structures, rates vary from 4.75 percent to 11.0 percent. Bird and Slack (forthcoming) report that property tax rates seldom exceed one percent.

We know of no country that does not impose a property tax. So, we might ask why? One can point to many disadvantages of the property tax. For example, it is hard to administer, the values placed on parcels only approximate market value, and if it is capital value form, it discourages investment. However, there are several advantages that seem to outweigh these disadvantages. Property is the main source of wealth, and thus the property tax is the principal tax on wealth, which is one of the three forms of tax bases, income, expenditures, and wealth. Real property, and land in particular, is not mobile and thus it is difficult to escape the property tax. A land value tax is non-distortionary (see Chapter 3). And, to the extent that the property tax is used to finance local government services, the value of property reflects the value of the public services provided by the local government. For a complete discussion of the advantages and disadvantages of the property tax see Netzer (1966).

## Property Tax Rates

### A. Current Rate Structure

The 2002 general revaluation of land values led to substantial increases in taxable values, about a 6.1-fold increase. (For a discussion of the data used in the analysis of the property tax, see Box 2) .

#### **Box 2. Data Sources**

Fiscal Services provided several data sets. The property tax ledger file contains the taxable value, tax liability and payment for each parcel for 2001, 2002, and 2003. The property tax roll file contains the location of each parcel as well as some information on the characteristics of the parcels, including size and use to which the parcel is being put. The exemption file listed all parcels that are exempt from property taxes and the reason for the exemption, i.e., the property type. We also were provided with a file that contained a cumulative list of all parcels that had been granted a relief or derating. This file included the nature of the relief or derating and the dates when the relief or derating became effective and the date it ended. All of the files contained the property valuation number. Using this number we were able to match parcels across the various files.

If the tax rate structure that had been in existence since 1993 was applied to the new valuations, property tax liabilities would have substantially increased. The tax liability in 2001-02 was J\$738.4 million. If the 1993 rate structured had been applied to the 2002 valuations, the tax liability would have been J\$7,253.2 million, which represents a staggering 9.8-fold increase in total tax liability over the actual tax liability in 2001. There was a sense that such increases would have been politically unacceptable. Jamaica

is not alone in this concern, rollback of rates at the time of general revaluation is not an uncommon practice.

A multi-agency committee known as the Property Tax Review Committee was appointed to develop recommendations for the new rate structure. The Committee's recommendation (see Table 8) was not adopted by Parliament. The rate structure adopted by Parliament (see Table 9) had fewer brackets than the rate structure proposed by the Committee. However, the adopted rate structure retained the progressive nature of the 1993 tax rate structure, and was set so that tax liability increased over the previous pre-revaluation year. Both the Committee and the Parliament proposed a top marginal tax rate of 1.75 percent. There was strong public opposition to this new rate structure, and before it could be fully implemented, Parliament added a set of caps or maximum property tax liabilities. Table 10 shows the caps for 2003-04. For example, a parcel with a land value of J\$1 million would have paid J\$3000 in property tax under the original 2002 rate schedule adopted by Parliament, but only J\$1700 under the schedule with caps.

**Table 8: Proposed Property Tax Rate Schedule (Property Tax Review Committee)**

Property Value (in J\$)	Tax Rate (in J\$)
Less than 200,000	600
200,001 to 800,000	600 + 0.3% of the amount over 200,000
800,001 to 1,500,000	2,400 + 0.5% of the amount over 800,000
1,500,001 to 2,500,000	5,900 + 1.0% of the amount over 1,500,000
2,500,001 to 5,000,000	15,900 + 1.25% the amount over 2,500,000
5,000,001 or more	47,150 + 1.75% of the amount over 5,000,000

**Table 9: Property Tax Rate Schedule Adopted by Parliament**  
(in J\$)

Property Value	Tax Rate
Less than 200,000	600
200,001 to 1,000,000	600 + 0.3% of the amount over 200,000
1,000,001 to 2,500,000	3,000 + 0.5% of the amount over 1,000,000
2,500,001 or more	10,500 + 1.75% of the amount over 2,500,000

**Table 10: Property Tax Caps (2003-2004)**  
(in J\$)

Property Value	Cap (maximum tax liability)
200,000 or less	600
200,001 to 300,000	800
300,001 to 400,000	1,100
400,001 to 500,000	1,500
500,001 to 1,000,000	1,700
1,000,001 to 2,500,000	4,000
2,500,001 to 5,000,000	11,000
5,000,001 to 10,000,000	87,000
10,000,001 to 50,000,000	320,000
50,000,001 to 200,000,000	1,500,000
200,000,001 or more	4,000,000

The imposition of the caps results in effective property tax rates that have a very peculiar relationship to property value. (The effective tax rate is defined here as the property tax liability divided by the assessed property value.) To show this particular

relationship, we calculated the effective tax rate for selected property values.<sup>18</sup> Table 11 and Figures 1 and 2 show the effective property tax rate for each of these specific property values. Table 11 also contains the actual dollar tax liability for the selected parcel values. Figure 1 shows the pattern over all values up to J\$250 million, while Figure 2 shows the pattern up to a value of J\$20 million. Figure 2 makes it easier to see the pattern at lower property values. Also included in Figures 1 and 2 are the effective tax rates that would apply if there were no caps.

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<sup>18</sup> We selected property values at the top and bottom of each property value class (Table 10) and for that property value in each class for which the property tax liability just equals the cap. For example, for the value class J\$500,000 to J\$1,000,000, we calculated the tax liability at J\$1,000,000 and J\$1,000,001. The tax liabilities are J\$1,700 and J\$3,000, respectively, which imply effective tax rates of 0.17 percent and 0.30 percent, respectively.

**Table 11: Effective Property Tax Rates for Selected Property Values**  
(in J\$)

Property Value	Tax	Effective Tax Rate (in percent)
200,000	600	0.30
200,001	600	0.30
266,667	800	0.30
300,000	800	0.267
300,001	900	0.30
366,667	1,100	0.30
400,000	1,100	0.275
400,001	1,200	0.30
450,000	1,350	0.30
500,000	1,500	0.30
500,001	1,500	0.30
566,667	1,700	0.30
1,000,000	1,700	0.17
1,000,001	3,000	0.30
1,666,000	4,000	0.24
2,000,000	4,000	0.20
2,150,000	4,000	0.186
2,500,000	4,000	0.16
2,500,001	10,500	0.42
5,000,000	11,000	0.22
5,000,001	73,000	1.46
5,800,000	87,000	1.50
7,500,000	87,000	1.16
10,000,000	87,000	0.87
10,000,001	160,500	1.605
19,100,000	319,750	1.674
20,000,000	320,000	1.60
50,000,000	320,000	0.64
50,000,001	860,500	1.721
60,000,000	1,035,500	1.726
86,500,000	1,499,250	1.733
100,000,000	1,500,000	1.50
200,000,000	1,500,000	0.75
200,000,001	3,485,500	1.743
229,500,000	4,000,000	1.743
500,000,000	4,000,000	1.60



Figure 1: Effective Tax Rates

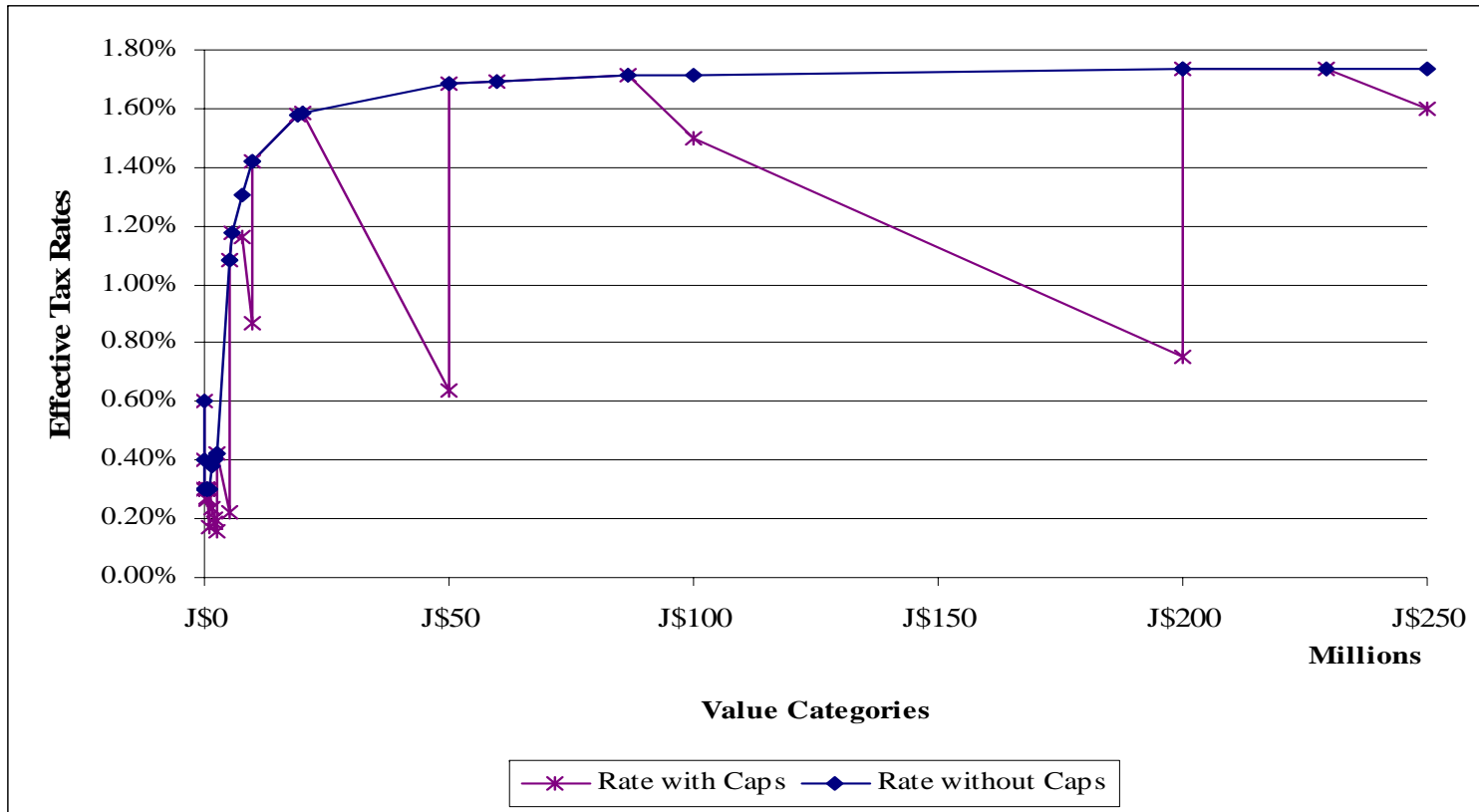
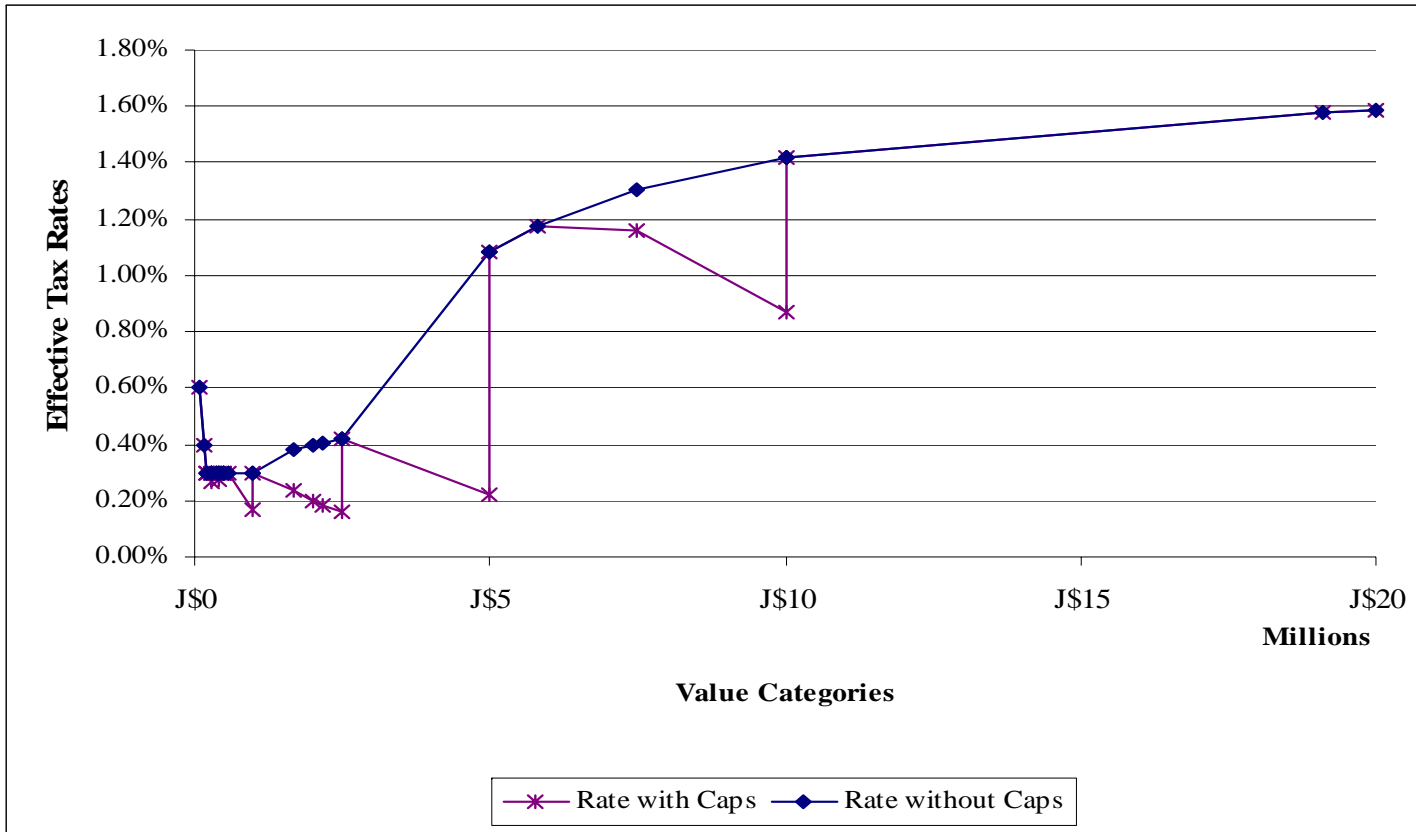


Figure 2: Effective Tax Rates



Some rather unusual patterns are observed in the effective rates with the caps. First, for land values above the point in the value class where the property tax liability implied by the statutory tax rate equals the cap, the effective rate goes down. Thus, for a value of J\$266,667 the effective rate is 0.3 percent, but the effective rate declines to 0.267 percent for a property valued at J\$300,000. Second, there is a large difference in tax liability for a parcel at the top of one value class and a parcel at the bottom of the next highest value class. The cap for one value class does not apply to parcels in the next highest value class. In other words, the tax liability for a parcel with a value equal to the lower bound of a value class equals the tax liability implied by the statutory rates in the absence of the caps. Thus, for example, going from a property value of J\$300,000 to J\$300,001, i.e., a one dollar increase in property value, the property tax liability increases by J\$100. Similarly, for a one dollar increase from J\$5,000,000 to J\$5,000,001, the property tax liability increases from J\$11,000 to J\$73,000, an increase of J\$62,000!

These notches and discontinuities in the tax rate structure created by the caps create inequities in the property tax. As seen in Table 11 and Figures 1 and 2, small differences in value can result in very large differences in tax liability, and at the upper end of each value class the effective tax rates are lower than for lower valued property. These notches also create various incentives. For example, an owner of a parcel with a valuation just above a notch will be more inclined to object to the valuation than an owner of a parcel just below the notch.

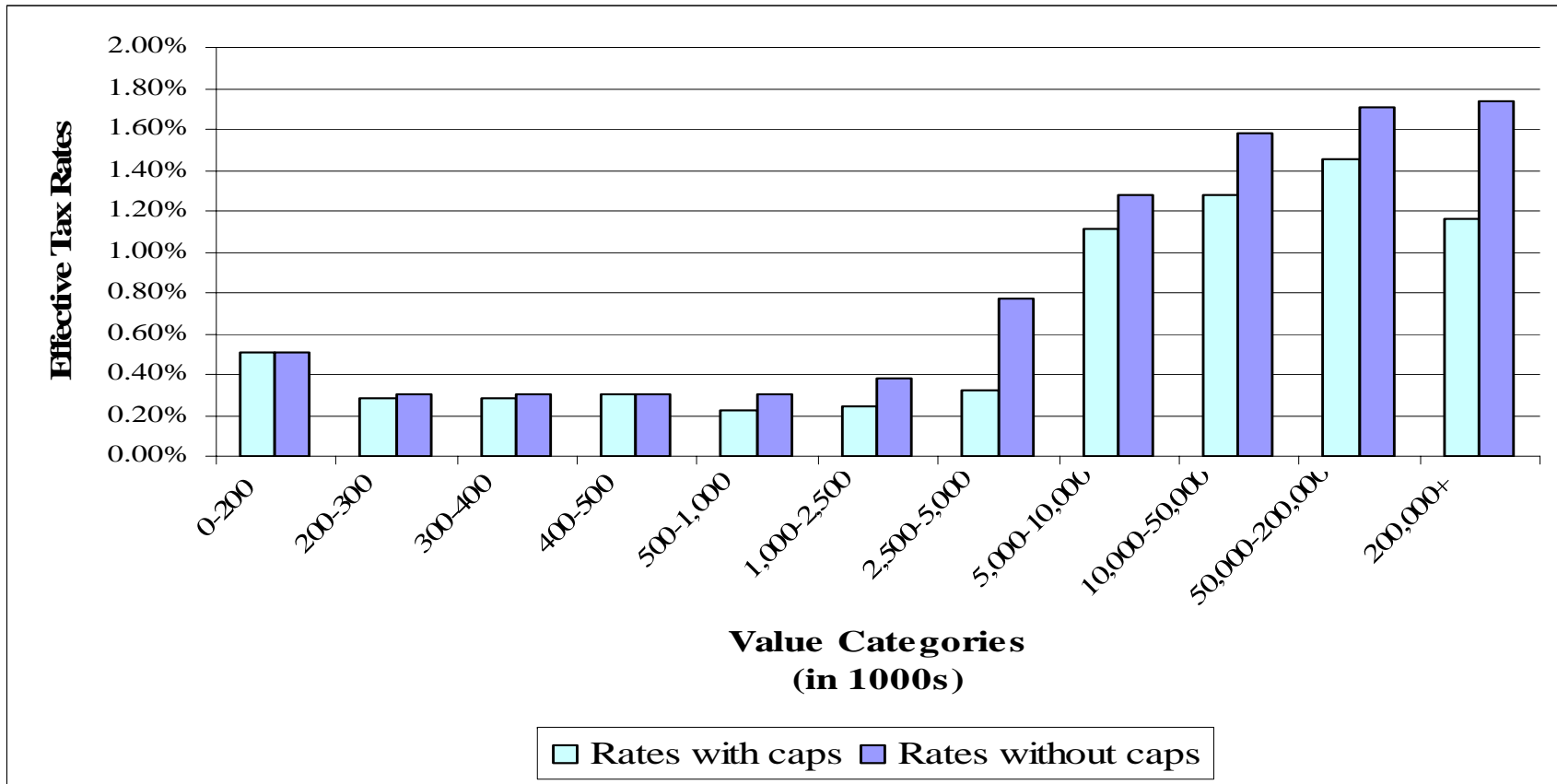
We also calculated the average effective tax rates for categories of property value, where the average effective tax rates were calculated as the sum of the actual tax liability for each parcel within a value class divided by the sum of the taxable property value

within that value class. Figure 3 shows how the average effective tax rates vary across value classes for the rates structure both with caps and without caps, where the value classes are the same as those in Table 10. As can be seen, the effective tax rate structure is somewhat U-shaped, but with much higher effective tax rates for properties with values greater than J\$5 million. The difference in the two bars shows the magnitude of the reduction in property tax liability due to the caps. The introduction of the caps makes the distribution of tax burdens less progressive. Particularly noteworthy is the reduction in the average rate in the top value class.

The presence of the caps reduces tax revenue. For 2003, the presence of the caps resulted in a total property tax liability that was about 25 percent below what the liability would have been in the absence of the caps.

The current rate structure has four tax brackets. For most countries the property tax rate is the same for all property values, although many countries do have differential tax rates based on factors such as the use of property and location (for example, Kenya, New Zealand and Zimbabwe). For countries that have tax rates that vary with property values the number of brackets varies widely. Chile has two rates, 2 percent on property under a certain value and 1.425 percent for property over that value. On the other hand, Thailand has 31 brackets, with rates varying from 0.3 percent to 0.64 percent but the rates are not progressive. In Columbia, Cali has 6 rates on residential property ranging from 0.4 percent to 0.145 percent, while Barranquilla has 6 rates ranging from 0.3 percent to 1 percent. Pakistan has 3 brackets, Cyprus has 8 brackets, and the Philippines has 9 brackets for residential property, 8 for commercial property, and 6 for agricultural property.

**Figure 3: Effective Property Tax Rates**  
(with and without caps)



## B. Distribution of Taxable Values and Liabilities

Table 12 shows the distribution by value class of the number of parcels, the taxable value, and the tax liability for the existing structure. Over 27 percent of the parcels have values of less than J\$200,000. These parcels account for 4.2 percent of the taxable value and tax liability under the current tax structure. Under the current tax structure, 58 percent of the property tax liability is imposed on owners of parcels with values in excess of J\$5 million, although these parcels account for 23.0 percent of the total property tax base and only 1.2 percent of all parcels.

**Table 12: Distribution of Parcels and Value for 2002-03**

Class	Parcels		Taxable Value		Tax Liability
	Number	Percent of Total	Total Value (in billions J\$)	Percent of Total	Percent of Total
0-200,000	189,468	27.15	22.556	4.17	4.18
200,000-300,000	92,455	13.25	24.983	4.62	2.60
300,000-400,000	81,521	11.68	30.853	5.70	3.23
400,000-500,000	70,455	10.10	33.938	6.27	3.75
500,000-750,000	92,928	13.32	60.165	11.12	5.79
750,000-1,000,000	68,116	9.76	60.968	11.27	4.26
1,000,000-2,000,000	65,666	9.41	97.602	18.04	9.56
2,000,000-3,500,000	23,042	3.30	60.900	11.26	6.31
3,500,000-5,000,000	5,730	0.82	24.357	4.50	2.32
5,000,000+	8,366	1.20	124.730	23.05	58.00
Total	697,747	100.00	541.052	100.00	100.00

Table 13 shows how property tax liabilities vary across property types. Note that the property type is not identified for a substantial percentage of parcels. Commercial and industrial property combined accounts for 46.6 percent of total tax liability.

**Table 13: Distribution of Tax Liability  
by Property Type**

Percent of Total Tax Liability	
Property Type	Current
Agriculture	1.47
Residential	20.63
Commercial	28.98
Industrial	17.65
Institutional	4.51
Subdivision	5.58
Recreation	2.11
Unknown	19.07
<b>Total</b>	<b>100.00</b>

We are unable to associate total property tax liabilities with household income. However, the Jamaica Survey of Living Conditions does relate property taxes directly paid by households to household consumption. One of the limitations is that this information is not available for years after the 2002 general revaluation. We were able to calculate for 2001, the property tax on residential property owned by households as a percentage of the household's total consumption. Total consumption is a good measure of a household's standard of living. Table 14 shows the percentage of household consumption that is paid in property taxes by consumption quintile. There is no discernable pattern between household economic well being and the share of consumption devoted to property taxes. A more complete analysis of the incidence of the property tax will be part of the separate report on tax incidence.

**Table 14: Property Taxes as a Percentage of Total Household**

Consumption Quintile	Property Taxes as a Percentage of Household Consumption
Poorest – 1	0.15
2	0.09
3	0.16
4	0.11
Richest – 5	0.17

As noted above, the Property Tax Review Committee proposed a rate structure that was not adopted (Table 8). We estimate that for 2003-04 this structure would produce a tax liability of J\$3.7 billion compared to a tax liability of J\$2.5 billion for the adopted rate structure. Table 15 shows the distribution across property value classes of effective tax rates (tax liability divided by taxable value) for both the Committee's proposed rate structure and the current tax rate structure. As would be expected given the difference in tax liability the effective rates for the Committee's proposal are, on average, greater than the existing rates, and this is particularly so for the higher value classes.

**Table 15: Effective Tax Rate for Committee's Proposed Tax Structure and Current Tax Structure**

Value Class (in thousand J\$)	Effective Tax Rate	
	Committee's Proposal (in percent)	Current Structure (in percent)
< 200	0.50	0.50
200-300	0.30	0.28
300-400	0.30	0.28
400-500	0.30	0.30
500-750	0.30	0.26
750-1,000	0.32	0.19
1,000-2,000	0.43	0.27
2,000-3,500	0.68	0.28
3,500-5,000	0.89	0.26
>5,000	1.46	1.26

### C. Revenue Elasticity

To explore the revenue responsiveness of the existing tax rate structure to the growth in land values, we simulated the effect of an increase in all taxable values of 10 percent on the tax liability implied by the existing tax structure. The result of the 10 percent increase in taxable values produced a calculated increase in tax liabilities of 14.1 percent. Thus, the implied tax elasticity is 1.41, which is quite large, and is due to the progressive structure of the tax rates. The implication is that if land values were allowed to increase on an annual basis, property tax revenues would increase substantially.

The above analysis assumes, however, that each parcel increases by the same percentage, namely 10 percent. But in reality property values do not all increase by the same percentage.

One way of considering the effect on property tax revenue from actual increases in parcel values is to simulate the change in tax liability resulting from the actual increase in parcel assessed values between 2001 and 2003. To do this we considered parcels that existed in both 2001 and 2003. For these parcels, total taxable value increased by 503 percent between 2001 and 2003. We calculated the implied tax liabilities under the current tax rate structure using the 2001 taxable values and the 2003 taxable values. The 2003 tax liability is 302 percent larger than the tax liability using the 2001 values. This implies a revenue elasticity of 0.6, substantially less than that calculated above.

The implication of this later result is that the distribution of the increases in taxable value, combined with the peculiarities of the rate structure results in an actual increase in tax liabilities that is less than the calculated increase if all values had increased by the same percentage. On average, parcels which had a high assessed value in 2001 had a lower assessed value in 2003 (see below). Thus, parcels that would have been taxed at high tax rates experienced a decrease in value, while those taxed at low tax rates were the ones that experienced an increase in value. This pattern of value changes reduced the potential increase in tax liability from an equal percentage increase in value. Furthermore, the very large percentage increases pushed property up against the tax cap, further limiting the increase in property tax liability. The implication of this result is that if parcels were revalued annually and the tax rate structure was not changed, tax liability would increase 6 percent for every 10 percent increase in total taxable value.

### **Collection Rate**

The collection rate for property taxes is very low, and declined precipitously after 2002. Collection rates are calculated as the percentage of tax obligations that are paid. Consider first the one-year collection rate, i.e., the percentage of tax obligations paid by the end of the tax year.

(Unfortunately, we are unable to determine the percentage of taxes paid on time.) For 2001-02, 52.0 percent of 2001-02 tax obligations were paid by March 31, 2002. For 2002-03, only 25.5 percent of obligations were paid by March 31, 2003, a substantial decrease in the collection rate. For 2003-04, the one-year collection rate rose to 40.0 percent.

We also calculated the to-date collection rate, which is the percentage of tax obligations from any year that have been paid as of the most recent date, which for our calculations is April 29, 2004. These to-date collection rates are: 65.4 percent for 2001-02, 46.7 percent for 2002-03, and 42.0 percent for 2003-04. Care must be made in making comparisons across these to-date collection rates since the time over which payment can be made differs. It is clear that a substantial percentage of collections occur more than a year after the initial due date. For 2002-03, nearly half of the payments were made more than a year after the due date. For 2002-03, property tax liabilities on 37 percent of the parcels were paid in full, 16 percent were paid in part, and for 47 percent of the parcels no payment was made.

Table 16 and Figure 4 show how the to-date collection rate for 2002-03 varies across property value classes. The lowest collection rates are for the lowest and highest two value classes, while the highest collection rate is observed for the mid-value classes. The range of collection rates is modestly high, 15.6 percentage point.

**Table 16: Collection Rate (2002-2003)**

Value Class (in J\$)	Collection Rate (in percent)	
	All Parcels <sup>a</sup> (in percent)	Residential Parcels (in percent)
<200	35.9 (23.7)	44.9
200-300	40.0 (44.0)	43.6
300-400	41.0 (53.7)	42.8
400-500	42.5 (61.1)	44.5
500-750	46.7 (61.7)	49.5
750-1,000	53.2 (58.3)	57.9
1,000-2,000	51.5 (55.0)	59.3
2,000-3,500	47.9 (50.8)	55.7
3,500-5,000	46.2 (31.8)	53.0
> 5,000	37.3 (20.8)	33.3

<sup>a</sup>The numbers in parenthesis are the percentage of parcels within the class that are residential.

Figure 5 presents two measures of average effective tax rates for the current rate structure for various value classes. The upper line is based on tax liability, that is, the effective tax rate equals the total tax liability for a value class divided by the total taxable value in that value class, and is the same as presented in Figure 3. The lower line is based on actual tax payments, that is, that effective tax rate equals the total tax payment for a value class divided by the total taxable value in that value class. The difference between the two lines reflects the percentage of the tax liability that is not paid. The greater the relative distance between the two lines the lower is the collection rate. The simple correlation between the collection rate and the effective tax rate, calculated using tax liability, is -0.58. This is consistent with what is observed in Figure 5, i.e., higher effective tax rates is associated with lower collection rates.

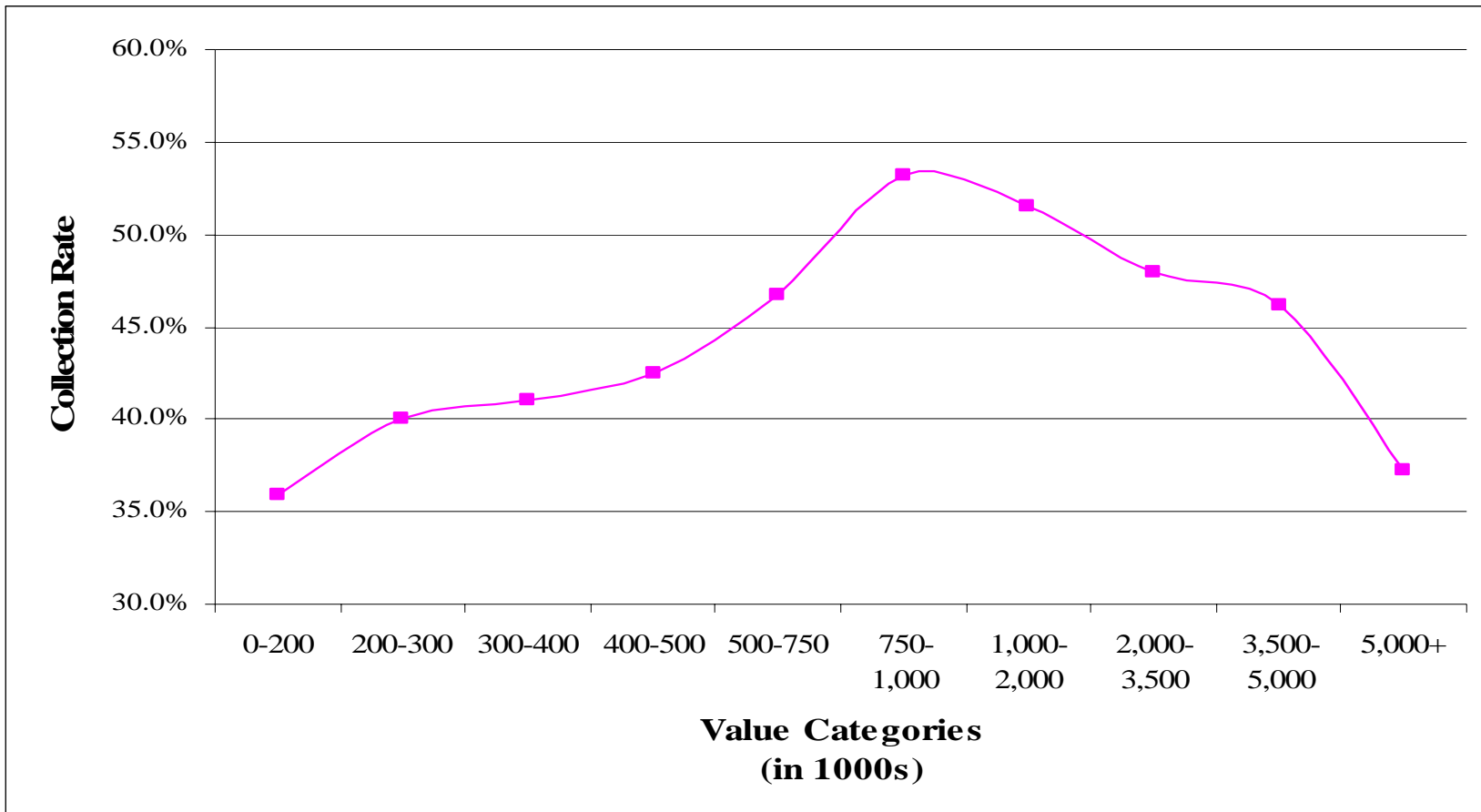
**Figure 4: Collection Rates**

Figure 5: Current Effective Property Tax Rates

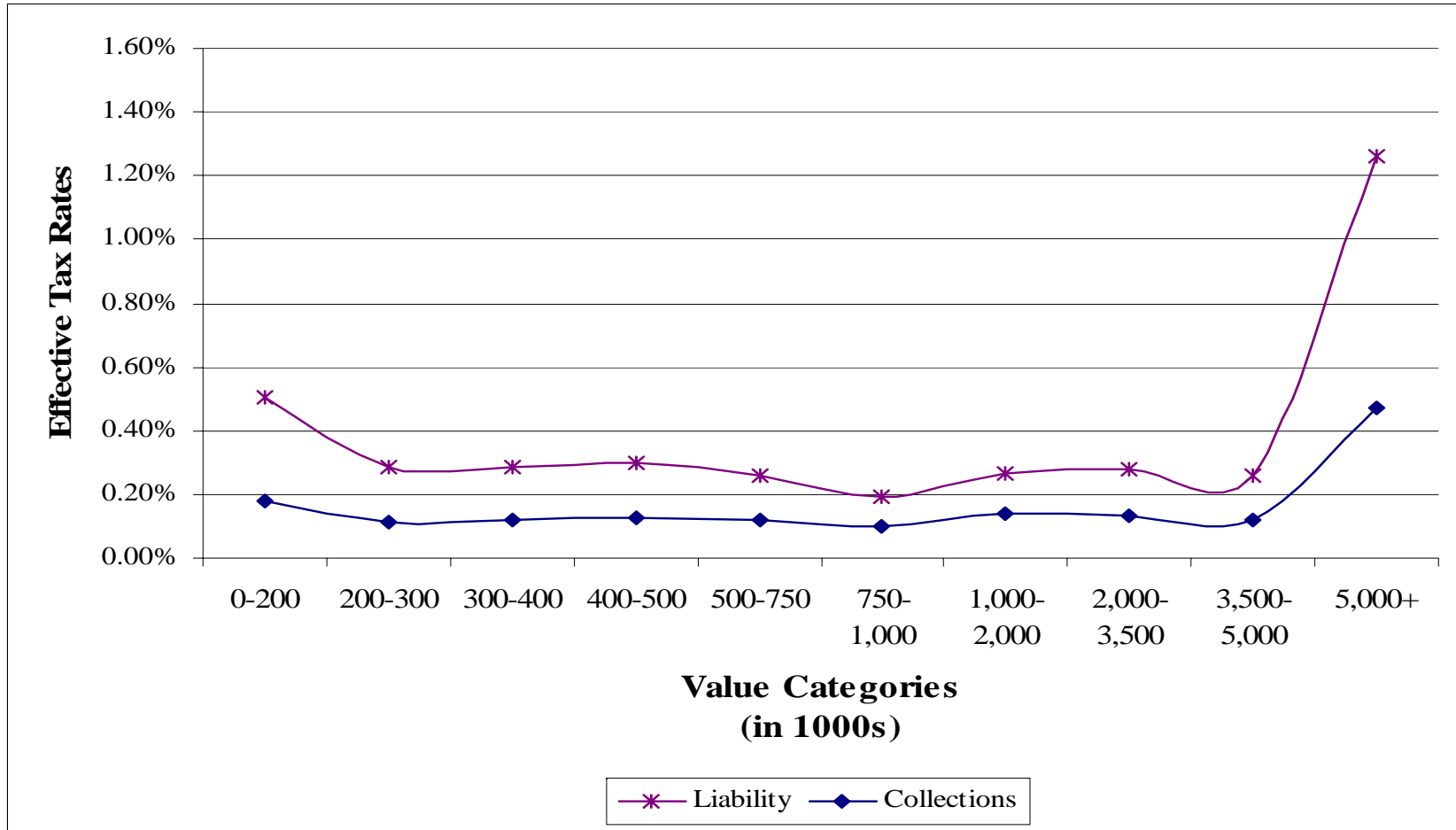


Table 17 shows the collection rate by property class. There is an even wider variation across property classes than across property values, with a range of 28.3 percentage points. There are a substantial number of parcels for which the property class is unknown, which means that the actual collection rate for each property class differs from what is reported in Table 17.

**Table 17: Collection Rates by Property Class (2002-2003)**

Property Class	Number of Parcels	Collection Rate (in percent)
Agriculture	183,230	30.5
Residential	321,874	47.6
Commercial	18,033	52.2
Industrial	2,901	56.4
Institutional	4,590	28.1
Subdivision	764	28.9
Recreation	1,911	37.3
Unknown	176,549	33.9

Table 18 shows the collection rate by Parish. There are substantial differences in collection rates across parishes, ranging from 29.3 percent in the parish of Trelawny to 56.5 percent in the parish of Kingston.

The decrease in collection rates that occurred in 2002-03 is no doubt associated with the new valuations and tax rates. However, at this same time, the government waived penalties and interest for non payment. It is impossible to determine the importance of these two factors. Note that even in 2001-02, the collection rate was low, even though for most parcels the property tax liability had not changed since 1993, the date of the last valuation and tax rate change. This certainly seems to suggest that there is a lack of enforcement, a conclusion also drawn from interviews with representatives of the Inland Revenue Department about steps that are taken to enforce payment.

**Table 18: Collection Rates by Parish (2002-2003)**

Parish	Number of Parcels	Collection Rate (in percent)
Kingston	11,887	56.5
St. Andrew	86,397	50.3
St. Thomas	36,610	41.6
Portland	31,926	43.1
St. Mary	45,836	36.8
St. Ann	56,463	47.0
Trelawny	26,034	29.3
St. James	37,482	44.2
Hanover	20,303	52.6
Westmoreland	34,340	40.4
St. Elizabeth	53,445	37.3
Manchester	55,162	30.5
Clarendon	80,761	31.7
St. Catherine	112,057	39.4
Unknown	11,149	43.1

### **Exempt Property**

Jamaica exempts a fairly standard set of properties from property taxation. The exempt property includes essentially land owned by the government, and land used for schools, hospitals, cemeteries, and charitable purposes. (See Chapter 1 for a complete description.) Table 19 shows the distribution by number of parcels and value for the identified classes of exempt property. The value of exempt property is determined in the same way that the value of other land is valued, i.e., by the sales price of similar types of land.

**Table 19: Exempt Properties (2002-2003)**

Exemption Class	Number of Parcels		Value of Exemptions	
	Number	Percent of Total	Total Value (in J\$)	Percent of Total
Religious Worship & School	463	4.66	1,170,685,000	4.37
Charitable Purpose	29	0.29	119,995,000	0.45
Educational Purpose	20	0.20	191,280,000	0.71
Library	4	0.04	37,860,000	0.14
University of the West Indies	10	0.10	628,300,000	2.35
School (Primary, Approved, Endowed)	100	1.01	1,700,057,000	6.35
School (Consolidated Fund)	8	0.08	102,680,000	0.38
School (Certified By Moe)	14	0.14	74,940,000	0.28
Beach Control Authority	5	0.05	7,200,000	0.03
Crown Lands	8	0.08	43,805,000	0.16
Government Lands	2827	28.43	4,197,253,000	15.68
KSAC	215	2.16	563,640,000	2.11
Parish Council	783	7.87	998,001,500	3.73
Commissioner Of Lands	3639	36.59	10,677,551,000	39.90
Jamaica Public Service	64	0.64	33,675,000	0.13
Council of Legal Education	0	0.0	0	0.0
Administrator General	16	0.16	7,480,000	0.03
Church Building	1327	13.34	2,292,463,000	8.57
Church Rectory	25	0.25	34,165,000	0.13
Church Caretaker's Cottage	0	0.0	0	0
Church Hall	7	0.07	71,310,000	0.27
Church Lands	103	1.04	234,610,000	0.88
Private Hospital – Approved	6	0.06	88,700,000	0.33
Approved Organization	124	1.25	2,214,985,000	8.28
Approved Purpose	141	1.42	1,230,120,500	4.60
MoF Approved	3	0.03	32,260,000	0.12
Foreign Missions	3	0.03	8,500,000	0.03
<b>Total</b>	<b>9,944</b>	<b>100.00</b>	<b>26,761,516,000</b>	<b>100.00</b>

The bulk of the exempt properties are government lands and church property, which account for over 78 percent of the parcels and 64 percent of the land value. Exempt property accounts for a small percentage of total land value, less than 5 percent.

### **Relief and Derating**

As noted in Chapter 1, there are two types of relief, statutory and discretionary. In 2003-04, according to government records, there were 31 applications for statutory relief, of which 15

were approved (three were deferred). These 15 parcels have an assessed value of J\$78.5 million, but a taxable value because of relief of J\$25.4 million. Thus, the reduction in taxable value because of statutory relief is J\$53.1 million. All of the parcels had assessed values of more than J\$2 million, and 8 had assessed values of more than J\$5 million.

Statutory relief certificates continue in force until a new valuation roll comes into force, so that beginning in 2002-03, all of the previously granted statutory relief certificates no longer apply. Since statutory relief continues until the next revaluation and since the number of parcels that are granted statutory relief is likely to continue to grow, over time the reduction in taxable value will be larger than J\$53.1 million. Thus, we took the parcels that had statutory relief that expired March 31, 2002 and calculated the tax liability for 2002-03 using the new values and new tax rate structure. We identified 49 such parcels in our data (see Box 2 for a description of the data). Of these parcels, all had 2002-2003 assessed values in excess of J\$750,000, and 55.1 percent exceeded J\$5 million. Assume that these 49 parcels represent all of the parcels that will be provided statutory relief before the next revaluation. If we assume that the relief for each parcel equaled the parcel's entire tax liability, then the reduction in tax liability in 2002 would have amounted to J\$4.4 million. Thus, it does not appear that statutory relief has much effect on the magnitude of property tax revenue.

For 2002-03 there were 841 applications for discretionary relief, of which 581 applications were approved.<sup>19</sup> The parcel value is known for 287 of the 581 parcels approved for discretionary relief. Approximately one-third of these 287 parcels were valued at J\$500,000 or less, approximately one-third had values between J\$500,000 and J\$1 million, and approximately one-third had values over J\$1 million. The maximum value was J\$25 million.

Of the 581 parcels approved for relief, there were 30 applications that did not receive any relief and 71 for which the amount of relief could not be determined from the records available.

Of the 480 parcels that we know received relief, the percentage relief was 25 percent or less for 76 parcels, between 25 and 50 percent for 259, between 50 and 75 percent for 97 parcels, and over 75 percent for 48 parcels (175 parcels had percentage relief equal to 50 percent). For these 480 parcels, the total relief was J\$1.46 million, or 55.1 percent of the tax liability. Discretionary relief is less than 0.1 percent of tax collections, an extremely small amount. If the same percentage relief was applied to the 71 parcels for which the level of relief is unknown, the total relief increases to J\$1.58 million.

According to government data, in 2002-03, there were 167 parcels that qualified for derating. The reduction in taxable value as a result of these derated parcels was J\$598.8 million, or about 0.1 percent of the total property tax base. Derating is granted for a three-year period, and the number of qualified parcels varies by period. There were 20 parcels, with an assessed value of J\$134.6 million, that were approved for derating for the period 2000-03. For the period 2001-04, there were 44 parcels, with an assessed value of J\$307.5 million, which qualified for derating. For the periods 2002-2005 and 2003-2006, there were 103 and 35 parcels, with assessed values of J\$754.5 million and J\$256.8 million, respectively, which qualified for derating. In all cases, the taxable value was 50 percent of the assessed value.

### **Changes in Land Values from the General Revaluations**

As noted above, land values and tax rates are not adjusted between major valuations, which occur about every 9 or 10 years. The result is extremely little growth in property tax revenue and growing inequities over time. Since the increases in land values are not uniform across properties, the result is that property tax liabilities become less and less closely related to true market value of land as the time period since the last general revaluation grows longer.

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<sup>19</sup> There were 26 applications for which the outcome was unknown.

Table 20 shows the average percentage change in value by 2001 value class. As can be seen, the average percentage change is smaller the larger is the 2001 value. That is, the higher the original (2001) land value, the lower the percentage increase in value due to the general revaluation. In fact, on average, the highest valued parcels realized decreases as a result of the 2002 revaluation. Table 21 shows the percentage increase in value by parish. There are substantial differences in the percentage increase across parishes.

**Table 20: Average Percentage Change in Value**

Value Class (in thousand J\$)	Number of Parcels	Average Percent Increase
< 25	167,248	4701.9
25-50	215,871	1748.1
50-100	168,371	1017.8
100-150	41,295	605.9
150-200	24,097	493.9
200-300	21,868	405.6
300-400	12,918	271.4
400-500	11,151	181.2
500-750	9,555	97.8
750-1,000	4,211	30.6
1,000-2,000	4,321	-25.2
> 2,000	3,366	-6.7

**Table 21: Increase in Value by Parish**

Parish	Percentage Increase
Kingston	331.3
St. Andrew	266.5
St. Thomas	280.8
Portland	756.4
St. Mary	656.1
St. Ann	892.8
Trelawny	672.0
St. James	539.0
Hanover	569.8
Westmoreland	563.7
St. Elizabeth	997.6
Manchester	820.7
Clarendon	837.6
St. Catherine	497.8

One way to illustrate the inequity that arises when market values change but taxable values are not changed is to calculate the assessment ratio, which is the ratio of taxable value to market value, and then consider the distribution of those ratios. Assuming that the 2003 values equal the true market value, the assessment ratio can be calculated as the ratio of the 2001 value to the 2003 value. The median assessment ratio was 0.114. The smaller the assessment ratio the lower the percentage of market value that is actually taxed. For example, a property with a market value of J\$1 million but a taxable value of J\$100,000 is being taxed on only 10 percent of its value. A ratio greater than one implies that the 2003 value is less than the 2001 value, and therefore in 2001 the parcel was being taxed on more than 100 percent of its market value. Table 22 shows the distribution of the assessment ratios. If all parcels had the same ratio, there is no equity issue, every parcel would be taxed on the same percentage of its market value. But if some parcels are taxed on, say, 10 percent of market value while other are taxed on 100 percent of market value, then there are substantial inequities. As can be seen, there is substantial variation in the assessment ratio, although almost 58 percent of the parcels have assessment ratios of 0.05 to 0.20.

**Table 22: Ratio of 2001 Value to 2003 Value**

<u>Ratio Values</u>	<u>Percent</u>
< 0.05	5.30%
0.05 - 0.10	31.86
0.1 – 0.15	26.00
0.15 – 0.20	13.83
0.20 – 0.30	12.89
0.30 – 0.40	5.30
0.40 – 0.50	2.26
0.50 – 0.75	1.61
0.75 – 1.0	0.88
1.0 – 100	0.06
> 100	0.02

A common way to summarize the distribution is the coefficient of dispersion, which is a common measure of valuation inequality. The coefficient of dispersion (CoD) is the average absolute difference between the median ratio value and the ratio for each parcel, expressed as a percentage of the median ratio. The equation is

$$CoD = (\sum |R_m - R_i| / N) / R_m$$

where  $R_m$  is the median value of the ratios,  $R_i$  is the ratio for  $i^{\text{th}}$  parcel, and  $N$  is the total number of parcels. Higher values of the CoD imply greater inequality. The coefficient of dispersion is 1.018.<sup>20</sup> This is very high; a CoD of 0.15 in a developed country is considered good.

The wide variation in assessment ratios implies large inequities, both horizontal and vertical. Parcels with the same market value are taxed on substantially different assessed values, and thus the ratio of tax liability to market value differs. Likewise, properties with substantially different market values could have the same total tax obligation. The implication is that some owners have a much larger share of the total property tax obligation than would be fair, while other owners have a much lower share than is fair.

Such inequities affect the actual progressivity of the property tax that is implied by the tax rate structure. Given the relationship between the change in assessed value and the 2001 assessed value (Table 22), the implication is that tax liability was even more progressive, on average, than implied by the 2001 tax structure. In other words, the share of total tax obligation for parcels with high 2001 values would be higher using 2001 assessed values than if 2002 assessed values were used.

Such inequities can lead to a lack of confidence in the property tax. If an owner knows that his or her tax liability is substantially more than that for a similar but lower assessed parcel, the result can be a lack of compliance (see Pommerehne and Weck-Hannemann 1989; Spicer and Becker 1980; Alm, Jackson, and McKee 1993; Alm, McClelland, and Schulze 1999).

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<sup>20</sup> We excluded as outliers 23 parcels with ratios exceeding 3000.

## Chapter Three

### Land Value versus Capital Value Property Tax

Co-author: Ki-Whan Choi<sup>21</sup>

#### Introduction

The debate over the choice between a land value property tax and a capital value property tax has a long history in Jamaica. The first formal call for a land value tax occurred in 1944 with the publication of the Bloomburg Commission report. John R. Hicks and Ursula K. Hicks (1954) argued against the permanent adoption of a land value tax. Instead they recommended that capital improvements be initially excluded from the base, but then be brought into the base over time. Murray (1956), an Australian consulting with the United Nations, on the other hand, supported the land value tax. The Land Valuation Act of 1957 was a modified version of Murray's plan.

Although Jamaica has had a land value tax for nearly 50 years, the issue of whether to switch to a capital value tax continues to be discussed. The issue was discussed in the mid-1980s by Holland and Follain (1991) and Follain and Miyake (1991) as part of the Jamaica Tax Structure Examination Project. The main issues that inform this discussion can be categorized as follows: economic effects, equity, adequacy of the generated revenue generated, and administrative feasibility.<sup>22</sup> In this chapter we discuss these issues, relying on the existing literature. The limitation of the literature is that nearly all of the analysis is based on theoretical and simulation models, not empirical work.

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<sup>21</sup> Ki-Whan Choi is a doctoral student in the Department of Economics in the Andrew Young School at Georgia State University. He is currently writing his dissertation, which focuses on land value taxes.

<sup>22</sup> The literature dealing with the issues of LVT is vast. Carmean (1980) includes an exhaustive survey through 1980. For a general discussion of land value and other forms of property taxation, see Bahl and Linn (1992).

**Economic Effects**

The analysis of the economic effects of land value taxation (LVT) has a long history. Many economists, going back at least to Adam Smith, have advocated the heavy taxation of land values (or of the increments in land values). The principal rationale for this position is that in theory LVT, unlike most other taxes, causes no distortions in economic decision-making and therefore does not lower the efficiency of a market economy. In other words, the adoption of a land value tax should result in no economic effects, and thus generates no economic inefficiency.

Taxes on labor and capital create economic distortions because individuals alter their decisions regarding their supply of labor or capital as a result of the imposition of such taxes. Numerous empirical studies find that as a result of a tax on wages individuals alter the amount of time they work and a tax on the return to capital results in less investment.<sup>23</sup> Other empirical research finds that countries that impose relatively higher taxes on capital get less foreign investment. Land, on the other hand, is fixed in supply and is not portable. Thus, a tax on land value will not change the supply of land and the land use that was most profitable in the absence of a land value tax is the same as with a land value tax in place. The economic neutrality of LVT taxes have been formally demonstrated by many, including Brueckner (1986) and Mills (1991; 1998).

Brueckner (1986) uses a theoretical model, as opposed to empirical research, to explore the effects of shifting from a property tax that taxes land and improvement equally to a property tax system in which land is taxed at a higher rate than improvements. The issues he addresses are what will be the changes in the value of land, the price of housing, and the level of improvements. He finds that shifting to a graded property tax in which land is taxed at a higher rate than improvements increases the level of investment, and reduces the prices of housing and land.

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<sup>23</sup> For a review of these studies see Hausman (1985) and Hassett and Hubbard (2002).

DiMasi (1987) generalized and extended the analysis in Brueckner (1986) through the use of a general equilibrium model of an urban area in which all businesses are located in the central business district. DiMasi appears to be the first to use a computable general equilibrium model rather than a partial equilibrium framework to study land value taxes. Taxes are levied on land rents and capital values.

DiMasi finds that a pure site value tax in which a 100 percent tax is levied on land while no tax is levied on capital was not feasible, i.e., it did not raise sufficient revenue. DiMasi thus considered a split rate, or graded tax system, (i.e., one that imposes a higher tax rate on land than on improvements) and found that there was an increase in the welfare of the residents equal to 6.6 percent of the tax revenues raised. Sullivan (1984; 1985) used a similar framework to analyze a switch from a pure LVT to a capital value property tax and obtained results consistent with DiMasi.

Nechyba (1998) also developed a simple computable general equilibrium (CGE) model to pursue an analysis of the effect of land taxation in the context of a reform package that simultaneously lowers taxes on capital and increases the tax on land. His major findings include: 1) land taxes are more efficient than capital taxes (i.e., output is larger), and 2) land values rise for many types of land under a reform policy that replaces capital income taxes with taxes on land rents. His qualitative findings are consistent with most other studies.

Nechyba (2001) extended his earlier work to encompass state level effects and interactions among states, by assuming that each state is a small, open economy. The general equilibrium impact of revenue neutral tax reforms that raise the tax on unimproved land rents was simulated. His major findings include: 1) the impact of such reforms varies widely across different states that face different economic conditions and that rely on different sources of

current tax revenues, 2) under plausible yet conservative assumptions, reforms of tax systems toward greater taxation of land rents hold promise for substantial efficiency gains in the states, especially when states undertake such reforms unilaterally, 3) states that have relatively low initial output and make heavy use of taxes on capital are likely to benefit most from tax reforms.

Tideman et al. (2002) attempted to measure the economic efficiency of the current U.S. tax system using a CGE model. His conclusions include: 1) significant increases in the efficiency of the U.S. economy could be attained by shifting from land and capital taxes to a land tax, 2) in the long run the greatest increase in wages is achieved by shifting taxes from capital to land, and 3) even if conservative estimates of parameters are used, the potential gains are estimated at 6.6 percent of Net Domestic Product (NDP).

However, there is a debate over whether a land value tax changes the timing of the development of the land. But this debate is largely driven by the nature of the land value tax that each author assumes. Shoup (1970), Skouras (1974), Bentick (1982) and others have argued that LVT is not neutral with respect to the timing of development. According to Bentick, if the land tax depends on the current market value of the land and developers have to choose among mutually exclusive development projects with different time patterns of net revenue, the LVT raises the carrying cost of the land and increases the attractiveness of current relative to future development.

Tideman (1999), Vickery (1980), and Wildasin (1986) argue that the tax that these authors study is not a LVT. If the value of land for tax purposes were based not on its chosen use but on its highest and best use, the LVT would not distort the timing of investment decisions. Feder (1993) argues that the Shoup (1970) model can't be interpreted as a proof of non-neutrality of LVT because Shoup failed to distinguish between full development value and after-tax

development value, and his model was set up so that the landowner can reduce his/her tax by controlling development timing.

Calvo and Rodriguez (1979) analyses a land rent tax in a model in which generations age and leave estates to the younger generation. Exactly as suggested by traditional theory, the value of land falls by precisely the capitalized value of future taxes, with no change in any equilibrium factor prices.

Economic models imply that a shift from a capital value tax to a land value tax should increase the amount of capital per unit of land. There have been a number of empirical studies of the development effects of land value tax. Netzer (1966) provides a summary, but in general, the studies did not find any significant effect. More recent studies generally find a modest effect on real estate investment (Archer 1972; Grieson 1974; Pollack and Shoup 1977). The city of Pittsburgh had a spilt rate tax and at the end of the 1970s significantly increased the relative tax on capital vis-a-vis land. The studies of the development intensity in Pittsburgh conducted in the 1980s did not find any effect (Pollakowski 1982). However, a recent study by Oates and Schwab (1997) found significant effects on the development in Pittsburgh after the imposition of the more extreme spilt rate tax, but the authors are quick to point out that there are other possible forces that explain the development. The empirical literature thus seems to suggest that the adoption of a capital value tax as a replacement of a land value tax may have a small detrimental effect on investment.

The theory of land value tax allows us to make a statement about who bears the burden of the land value tax. The essential assumptions are that land is fixed in supply and that the market value of a parcel of land depends on the productivity of the land. The later assumption means that a buyer is willing to pay a higher price for a track of land that generates a higher profit.

Suppose that a potential buyer decides on the maximum price he would pay for a parcel based on the profitability of the proposed use of the land. Suppose that before he makes an offer a tax is imposed on that parcel of land. The buyer realizes that the potential profits from the land is now lower since he will have to pay the new property tax. Thus, the buyer will lower his offer price, and will lower it by present value of the taxes. Thus, the tax reduces the wealth of the current owner, even though the new owner nominally pays the tax.

What this means is that the burden of the tax on land is borne by the owner of the land at the time the tax was imposed. The current owner paid less for the land because of the tax and thus is no worse off because of the tax. The implication is that an analysis of the income of the current owner and the annual tax payment does not reflect the distribution of the economic burden of the land value tax.

### **Revenue Potential of LVT**

There has been a lively debate as to whether a LVT is capable of generating substantial revenue. Opponents of LVT argue that a LVT would not raise much revenue, and that such a minor levy could not significantly improve the efficiency of the economy. They argue that if land values drop substantially as a result of the tax, then the revenue from existing land taxes will be much lower than anticipated. For example, DiMasi (1987) finds that it will not yield sufficient revenue.

While it is commonly accepted that a LVT cannot finance all government as Henry George (1923) argued, the real question is what percentage can be financed. Grosskopf and Johnson (1987) surveyed the studies that have estimated the revenue potential of land value taxes. Netzer (1998) provides a more recent discussion.

The maximum annual tax revenue that can be generated by a land value tax equals the annual rent that the land generates. If the land value tax exceeds the rent that the owner can generate, the owner will simply abandon the land. The net value, i.e., the market value of land reflects the capitalized value of the return to the use of the land net of the tax on land. Thus, the higher the tax rate, the lower the market rate. To determine the potential revenue from a land tax it is necessary to determine the gross value of land. Since the tax rate on land is very low in Jamaica, the gross value of land is similar to the net value of land, i.e., the capitalized value of the tax is small.

The value of land in Jamaica as of 2002 is about J\$541 billion. If the real interest rate is 10 percent, then potential rents equal about J\$54 billion. Thus, the LVT could generate a maximum revenue of J\$54 billion, or about 46 percent of total taxes from all sources and almost 22 times current property tax liability.

### **Administrative Issues**

Some authors believe that LVT is administratively unfeasible because it is not possible to empirically divide property value between land value and building value (Mills, 1998). But as Bahl (1998) points out, while this criticism may or may not be relevant in industrialized countries, it is less relevant in developing countries. This is consistent with the views of Hicks (1970) who suggests that the assessment of land is quite straightforward if sufficient sales of vacant land are available. Reschovsky (1998) argues that the techniques that assessors have developed allows for assessing land even in the absence of a large number of vacant land sales. Oates and Schwab (1997) suggest that it appeared that the assessors in Pittsburgh did a good job of determining the value of land.

A second administrative issue is the cost of assessing property. Bahl (1998) claims that the assessment of property under a LVT can be done more cheaply and uniformly than a tax that includes improvements. In Jamaica, the cost of implementing a capital value tax would be quite high. First, there is no existing inventory of improvements. So the first step would have to be the creation of a cadastral that included all improvements and their characteristics. The latter is needed in order to determine the market value of improvements. The second task would be to assess the value of all improvements. Discussions with the evaluation staff have lead us to believe that the cost of preparing the first set of assessment would be very expensive and that the cost of revaluation would be much higher with a capital value tax than a LVT.

### **Model for Jamaica**

As part of the examination in the 1980s of the Jamaican tax structure, Follain and Miyake (1991) developed a 26 equation computable general equilibrium (CGE) model to analyze the effect of a switch in Jamaica from a land value tax to a capital value tax.<sup>24</sup> Specifically, they measured the effects of reducing revenue from the Jamaican income tax in favor of an equal increase in either a LVT or a capital value tax. This appears to be the first paper that uses a CGE model to directly study the issues of LVT.

The model consists of three production factors (land, capital, and labor), an intermediate good (real estate) and two final goods (housing a non-housing composite good). Consumers demand final goods as well as supply primary factors of production. Follain and Kiyake assume perfect competition in factor and product markets, as most CGE models do, and analyzed both an open and closed economy case. They calibrate the model so that the initial or benchmark results

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<sup>24</sup> Follain and Kiyake (1986) contains the same analysis.

are representative of the Jamaican economy in the early 1980s. Parameter values such as price elasticities are taken from published studies.

The principal measure of the welfare loss from economic distortions is excess burden, which can best be thought of as the loss of income that results from the economic distortions caused by taxes. Consider a reduction in the income tax revenue by 5 percent and its replacement by either a land value tax or a capital value tax. Consider the results from the closed economy. For 1982, to generate the replacement revenue would require a 1.7 percent land value tax or a 0.4 percent capital value tax. A switch to a LVT to reduce income taxes by 5 percent reduces the excess burden by 9 percent, while a switch to a capital value tax (CVT) reduces the excess burden by 2.8 percent. If 20 percent of the income tax is replaced by a property tax, excess burden is reduced by 33.8 percent if a LVT is used, but is increased by 74.4 percent if a CVT is used.

The replacement of income tax revenues with LVT revenues has virtually no effect on the composition of output or on the relative prices for market goods. However, using the CVT tax to replace part of the income tax does have effects on the composition of goods and relative prices. Housing declines by 1.46 percent if the CVT replaces 5 percent of the income tax and the price of housing relative to the price of nonhousing goods rises by 2.3 percent. Similar effects were found for the open economy version of the model.

The Working Paper that reports on the CGE modeling will contain an analysis of imposing a capital value tax. That analysis will be similar to that of Follain and Miyake (1991) but will use current data and a more ambitious and detailed CBE model than the one used by Follain and Miyake.

**Conclusion**

There are substantial advantages to a land value tax relative to an equal yield capital value tax. These advantages include higher economic efficiency, increased capital investment, and lower cost of administration. At this point it would be very difficult for Jamaica to implement a capital value tax without substantial upfront cost and a long lead time.

## **Chapter Four**

### **Options for Reform**

While there are several issues including the rate structure and the collection rate that should be addressed, in general the property tax in Jamaica is well structured and there is no need for a major overhaul. Based on the analysis of the property tax, we developed several reform options for addressing the issues identified in our analysis. The reform options listed here involve changes to the structure and operation of the property tax.

#### **Tax Rate Structure**

In this section we first discuss several reform options associated with the tax rate structure and then present an analysis of specific alternative changes to the tax rate structure

#### **A. Reform Options**

- **Remove the property tax caps**

The caps that were imposed after the 2002 general revaluation create an effective rate structure that can only be described as bazaar. Serious consideration should be given to eliminating the caps. As shown in Chapter 2 (Figures 1 and 2), the caps create large inequities. The property tax caps also reduce property tax liability by about 25 percent. If the caps are removed and if tax liability is to remain the same, it will be necessary to revise the tax rate structure.

- **Create a threshold exemption**

Providing a threshold exemption has two desirable features. First, since it eliminates a substantial number of parcels from the property tax system, it should reduce the cost of property

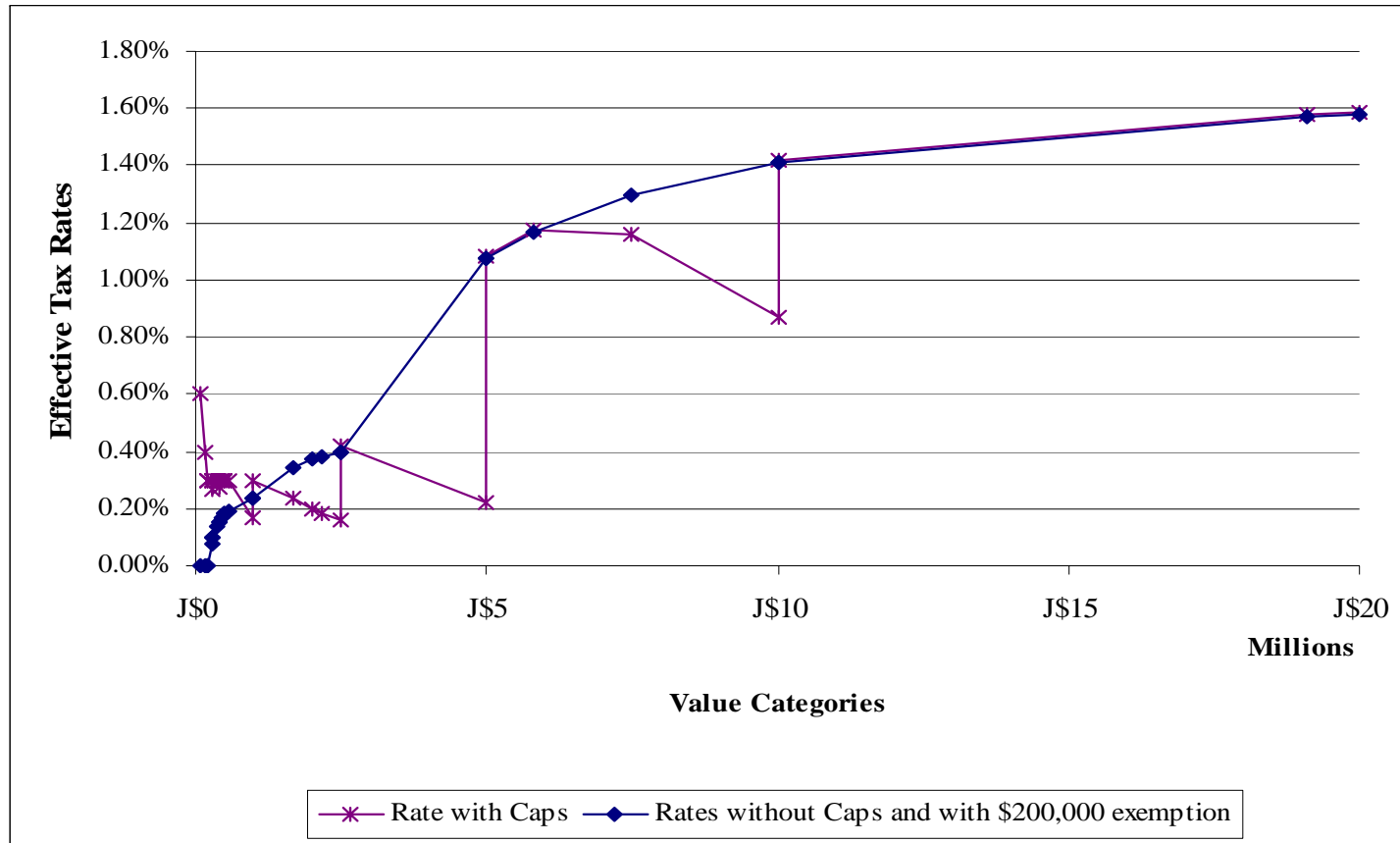
tax administration. Second, it increases the progressivity of the effective rate structure.

While the exemption could be of any amount, one obvious choice is J\$200,000 since that is the top of the first tax rate bracket. Currently, 27.1 percent of the parcels have values of less than J\$200,000 but account for only 4.2 percent of tax liabilities, and even less of actual collections (Table 12). Parcels with values of less than J\$300,000 account for 40.4 percent of all parcels and 8.8 percent of tax liabilities.

A threshold exemption of J\$200,000 would allow every owner to deduct J\$200,000 from the assessed value in order to arrive at taxable value. Thus, the loss in tax liability would be larger than 4.2 percent since every owner would receive a benefit. For the current rate structure but without the caps we estimate that the reduction in tax liability resulting from a J\$200,000 exemption would be 13.4 percent. We estimate that an exemption of J\$300,000 would reduce tax liability by 19.0 percent. However, the rate structure could be changed in order to replace the lost revenue. All of lost tax liability resulting from the adoption of a threshold would be replaced if the caps were eliminated at the same time the threshold was adopted.

The elimination of the caps and introduction of a J\$200,000 (J\$300,000) threshold exemption will reduce the tax liability for parcels with property values less than J\$566,666 (J\$666,666). For properties with values above that, the tax liability will decrease for those with tax liability below the cap. Tax liabilities will increase for those parcels that obtain more than a small benefit from the cap. Figure 6 shows the effective tax rate for the current tax structure with the caps and for the existing tax rates without the caps and an exemption of J\$200,000.

Figure 6: Effective Tax Rates



Eliminating property tax liability on 27.1 percent of the parcels should reduce administrative burden. First, staff time and office resources for mailing and collecting property taxes would be reduced. Second, the effort that is currently devoted to collecting delinquent property taxes from the owners of parcels that are worth less than J\$200,000 could be refocused on collecting delinquent taxes on the remaining properties. The result of being able to focus resources on collecting delinquent taxes from fewer parcels should improve the collection rate from these parcels. Given that the collection rate on parcels worth J\$200,000 or less is lower than average, eliminating these parcels from the tax base will automatically increase the overall collection rate.

One concern with implementing a threshold exemption is that many owners use the property tax receipt as “proof” of ownership. If that is in fact a concern, then one way to accommodate it is to mail a tax invoice to owners of property worth less than J\$200,000, but this tax invoice would state that there was no tax due. However, the owner would be given the option of making a voluntary but nominal payment in order to get a receipt stating that the owner “paid” property taxes. The payment required to get a receipt would be set low, say J\$100, but should be set to cover the cost of processing the paperwork and collecting the funds. If an owner did not make such a payment in one year, the system could be set up so that a tax invoice would not be mailed to that owner in the following years unless the owner requested that an invoice be sent.

- **Revise the nominal tax rate structure**

The current rate structure imposes a significant progression in the marginal tax rate for high valued parcels, increasing from 0.5 percent for the lowest valued properties to 1.75 percent for the highest. A more graduate rate of progression might be considered. Five alternative

revenue neutral tax rate structures are discussed below, each of which would allow a more gradual increase in marginal rates. We also consider a set of tax rate structures that would generate tax liabilities that are larger than the current level.

## **B. Analysis of Alternative Revenue Neutral Rate Structures**

### **1. Rate Structures**

We simulated five alternative revenue neutral property tax rate structures, ranging from a flat rate to a highly progressive rate structure (see Table 23). In each case the total property tax liability is close to the total property tax liability for the current tax structure with the caps in place, or approximately J\$2.5 billion. In other words, these are revenue neutral options that assume no change in the collection rate.

Figure 7 and Table 24 shows the effective tax rates for each of 10 value classes for each of the five alternative tax rate structures, as well as the effective tax rates for the existing rate structure. Table 25 shows the tax per parcel for each value class. Table 26 shows the tax liability under the current and the five alternative rate structures for specific parcel values. Because of the caps in the current rate structure, the tax liability can vary substantially between parcels of similar, but not identical, values; recall the large difference in the tax liability for properties value at J\$1,000,000 and J\$1,000,001 (see Table 11). Thus, care must be exercised in drawing generalities from the comparisons between the current rate structure and the five alternatives.

**Table 23: Alternative Tax Rate Structures**

Marginal Tax Rates					
Value Class (in thousand J\$)	Flat <sup>a</sup> (in percent)	Modified Flat <sup>b</sup>	Moderate <sup>c</sup>	Modified Progressive <sup>d</sup>	Progressive <sup>e</sup>
< 200	0.45	\$0	J\$400	J\$200	J\$0
200-300	0.45	\$0	0.2%	0.1%	0.1%
300-400	0.45	0.66%	0.2%	0.1%	0.1%
400-500	0.45	0.66%	0.2%	0.1%	0.1%
500-750	0.45	0.66%	0.4%	0.2%	0.1%
750-1,000	0.45	0.66%	0.4%	0.2%	0.2%
1,000-2,000	0.45	0.66%	0.5%	0.5%	0.5%
2,000-3,500	0.45	0.66%	0.7%	0.8%	0.8%
3,500-5,000	0.45	0.66%	0.8%	1.0%	1.0%
> 5,000	0.45	0.66%	1.0%	1.5%	1.75%

a There is no minimum tax.

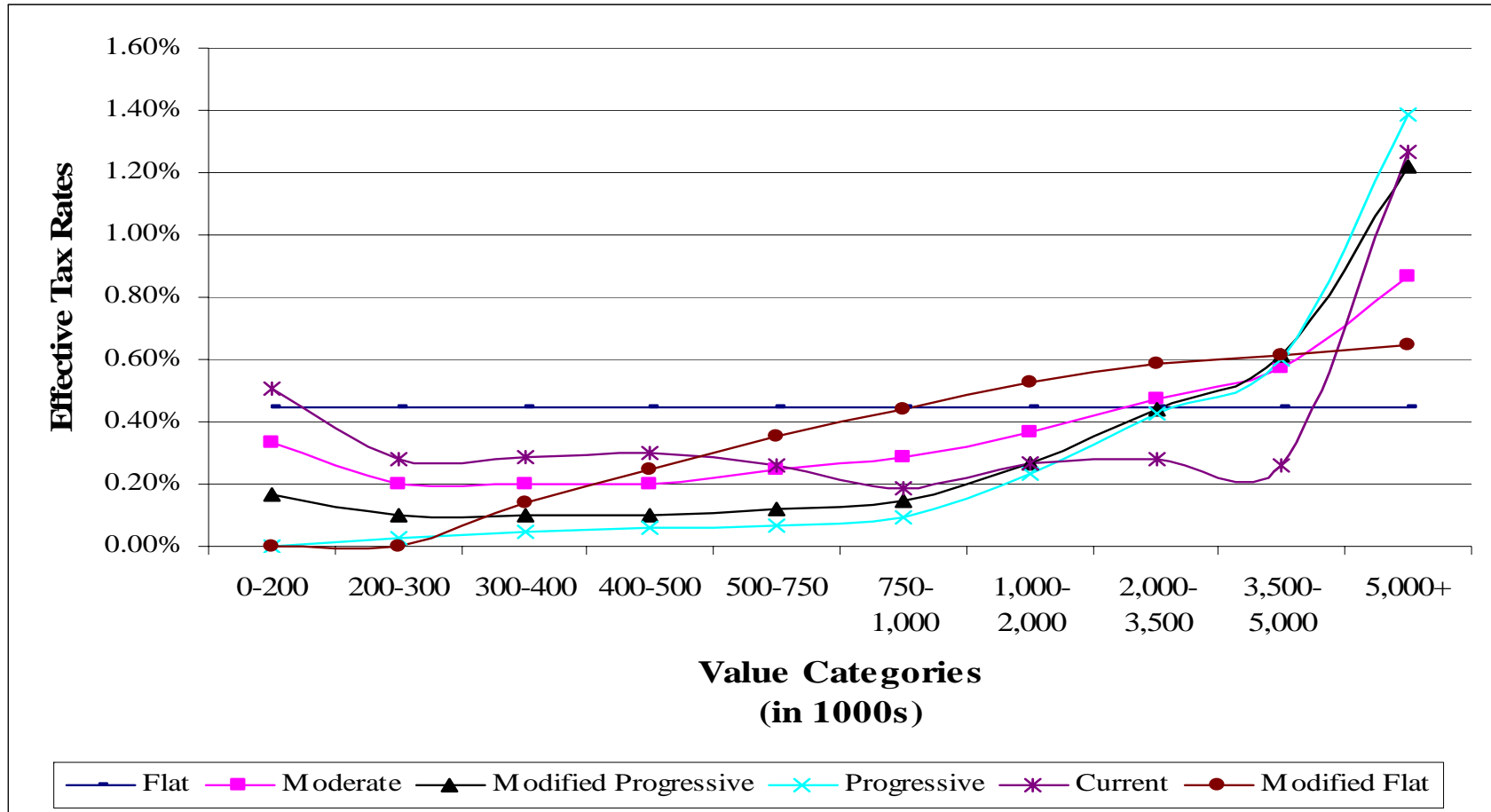
b The tax rate applies to taxable value less J\$300,000.

c There is a minimum tax of J\$400.

d There is a minimum tax of J\$200.

e The tax rate applies to taxable value less J\$200,000.

Figure 7: Effective Property Tax Rates



**Table 24: Effective Tax Rates**

Value Class (in thousand J\$)	Effective Tax Rates				
	Flat (in percent)	Modified Flat (in percent)	Moderate (in percent)	Modified Progressive (in percent)	Progressive (in percent)
< 200	0.45	0.0	0.34	0.17	0.0
200-300	0.45	0.0	0.20	0.10	0.03
300-400	0.45	0.14	0.20	0.10	0.05
400-500	0.45	0.25	0.20	0.10	0.06
500-750	0.45	0.35	0.25	0.12	0.07
750-1,000	0.45	0.44	0.29	0.14	0.09
1,000-2,000	0.45	0.53	0.37	0.26	0.23
2,000-3,500	0.45	0.59	0.47	0.44	0.42
3,500-5,000	0.45	0.61	0.58	0.61	0.60
> 5,000	0.45	0.65	0.87	1.22	1.38

**Table 25: Taxes Per Parcel**

Value Class (in thousands J\$)	Taxes per Parcel				
	Flat (in J\$)	Modified Flat (in J\$)	Moderate (in J\$)	Modified Progressive (in J\$)	Progressive (in J\$)
< 200	536	0	400	200	0
200-300	1,216	0	540	270	70
300-400	1,703	518	757	378	178
400-500	2,168	1,199	963	482	282
500-750	2,913	2,293	1,590	795	447
750-1,000	4,028	3,927	2,580	1,290	840
1,000-2,000	6,689	7,830	5,432	3,932	3,482
2,000-3,500	11,893	15,464	12,501	11,644	11,194
3,500-5,000	19,129	26,075	24,506	26,008	25,558
> 5,000	67,091	96,421	129,592	182,138	206,460

**Table 26: Tax Liability for Selected Taxable Values**

(in J\$)

Value (in thousand J\$)	Tax Alternative					
	Current	Flat	Modified Flat	Moderate	Modified Progressive	Progressive
100	600	450	0	400	200	0
200	600	900	0	400	200	0
250	750	1,125	0	500	250	50
300	800	1,350	0	600	300	100
350	1,050	1,575	330	700	350	150
400	1,100	1,800	660	800	400	200
450	1,350	2,025	990	900	700	250
500	1,500	2,250	1,320	1,000	800	300
550	1,650	2,475	1,650	1,200	600	350
1,000	1,700	4,500	4,620	3,000	1,500	1,050
1,500	4,000	6,750	7,920	5,500	4,000	3,550
2,000	4,000	9,000	11,200	8,000	6,500	6,050
2,500	4,000	11,250	14,520	11,500	10,500	10,050
3,000	11,000	13,500	17,820	15,000	14,500	14,050
5,000	11,000	22,500	31,020	30,500	33,500	33,050
10,000	87,000	45,000	64,020	80,500	108,500	120,550
20,000	316,750	90,000	130,020	182,500	258,500	295,550
50,000	320,000	225,000	328,020	480,500	708,500	820,550
200,000	1,500,000	900,000	1,318,020	1,980,500	2,958,500	3,445,550

A flat rate of 0.45 percent on all property would generate the same tax liability as the current rate structure with caps, and results in proportional effective tax rates. Since the total tax liability is the same for all five of the alternative rate structures, reducing the tax liability in one value class requires increases in the tax liabilities in other the classes. Thus, in order to provide any progressivity in the rate structure, it is necessary to reduce the tax rates on lower valued property and increase them on higher valued property. This can be seen by comparing the flat rate structure with the modified flat rate structure. The exemption of J\$300,000 reduces the tax on the lowest value parcels, but requires an increase in the flat rate to 0.66 percent. Lowering the exemption to J\$200,000 would provide a smaller benefit to low valued parcels over the flat rate, but would allow the flat rate to be reduced to 0.59 percent.

For the flat rate, modified flat rate, and progressive rate structures (see Table 23) there is no minimum tax, while there is a minimum tax for the other two tax structures. A minimum tax in the lowest tax bracket reduces the progressivity of the effective tax rates. (Note that progressivity here refers to the relationship between effective tax rates and land values, not the relationship with income.) Thus, for the moderate and modified progressive rate structures the effective tax rate in the lowest value class (\$200,000 or less) is higher than the effective tax rates for some of the other value classes. To generate a very progressive rate structure requires that the statutory tax rate for high-valued parcels be high, namely 1.5 percent. This rate is still below the statutory rate of 1.75 percent that currently exists for properties in excess of J\$2.5 million. However, the effective tax rates for parcels in excess of J\$2 million are greater for the progressive structure than for the current structure because the tax cap on these parcels limit the actual tax liability.

There are several advantages to a flat rate structure. First, it would eliminate the incentive to subdivide property in order to reduce property tax liability. With a progressive rate structure, two small parcels each worth J\$2.5 million will have a smaller tax liability than one parcel worth J\$5.0 million. Second, it makes discretionary rate increases easier than a structure with multiple rates. With multiple rates it is necessary to decide how much to change each rate and how the brackets should be changed. However, if there is an exempt class of properties, such as under the modified flat rate structure, then a decision would have to be made regarding the value below which properties are exempt. Third, there is no bracket creep if the rates are indexed to inflation or if parcels are revalued. Fourth, a flat rate might reduce evasion among the higher bracket payers. Our analysis of collection rates in Chapter 2 suggests that nonpayment is higher among higher valued properties, thus it is possible that keeping the rates on higher valued

parcels low, the collection rate might increase. The disadvantage of a flat rate schedule is that it eliminates any progressivity in the rate structure. In general, lower valued parcels will experience a reduction in the tax liability under a modified flat rate, while higher valued parcels, except for the highest valued parcels, will experience an increase in tax liabilities. Moreover, the shift to a flat rate structure from the current structure, in a revenue neutral setting, would shift the burden away from those who own higher valued land. This might raise important social issues and create significant political costs.

The modified flat rate allows an exemption of J\$300,000, with a tax rate of 0.66 percent on any value in excess of J\$300,000. Because of the J\$300,000 exemption, the effective rates become mildly progressive. Under the modified flat rate the effective tax rates on parcels with a value below (above) the J\$750,000 to J\$1 million category are lower (higher) than under the flat rate structure. One advantage of the modified flat rate over the pure flat rate structure is that 40.4 percent of parcels would no longer be subject to the property tax, thereby potentially reducing administrative costs (this is discussed below).

A progressive rate structure provides an incentive to subdivide property for purely tax purposes. But the progressive rate structure provides a disincentive to hold large tracts of land, thereby encouraging the breakup of large parcels, and discourages the assembly of large tracts.

## **2. Distribution of Taxable Values and Liabilities**

Table 27 shows the distribution by property value class of the tax liability for each of the rate structures, including the existing structure. Under the current structure, 58 percent of the property tax liability is imposed on owners of parcels with values in excess of J\$5 million, although these parcels account for 23.5 percent of the total property tax base and only 1.2 percent of all parcels. Relative to the current rate structure, the percentage of property tax liability for

parcels with values in excess of J\$5 million falls for the flat, modified flat, and moderate tax rate structures, and increases for the modified progressive and progressive rate structures.

**Table 27: Distribution of Tax Liability**

Class (in J\$)	Percent of Total Tax Liability					
	Current (in percent)	Flat (in percent)	Modified Flat (in percent)	Moderate (in percent)	Modified Progressive (in percent)	Progressive (in percent)
0-200,000	4.18	4.17	0.00	3.10	1.52	0.00
200,000-300,000	2.60	4.62	0.00	2.04	1.00	0.26
300,000-400,000	3.23	5.70	1.73	2.52	1.24	0.58
400,000-500,000	3.75	6.27	3.47	2.77	1.36	0.79
500,000-750,000	5.79	11.12	8.76	6.03	2.97	1.66
750,000-1,000,000	4.26	11.27	10.99	7.18	3.53	2.29
1,000,000-2,000,000	9.56	18.04	21.13	14.57	10.37	9.15
2,000,000-3,500,000	6.31	11.26	14.64	11.77	10.78	10.32
3,500,000-5,000,000	2.32	4.50	6.14	5.74	5.99	5.86
5,000,000+	58.00	23.05	33.14	44.29	61.23	69.09
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 28 shows how property tax liabilities vary across property types for the alternative tax rate structures. Note that the property type is not identified for a substantial percentage of parcels. With the exception of commercial and industrial property, there is little difference across rate structures in the percentage of property tax liabilities borne by the property types. Commercial and industrial property combined accounts for between 45 percent and 53 percent of total tax liability. Since the tax rate does not depend on property type, differences across the alternative structures in the percentage of the total tax liability that a property type pays is the result of differences across property types in the distribution of parcel values.

**Table 28: Distribution of Tax Liability by Property Type**

Property Type	Percent of Total Tax Liability					
	Current (in percent)	Flat (in percent)	Modified Flat (in percent)	Moderate (in percent)	Modified Progressive (in percent)	Progressive (in percent)
Agriculture	1.47	1.29	1.57	1.59	1.76	1.86
Residential	20.63	19.83	18.86	20.07	19.99	19.77
Commercial	28.98	42.23	40.04	33.76	26.99	23.81
Industrial	17.65	9.86	13.05	15.38	19.31	21.28
Institutional	4.51	2.21	3.01	3.66	4.71	5.23
Subdivision	5.58	2.81	3.78	4.87	6.46	7.29
Recreation	2.11	0.92	1.28	1.70	2.31	2.63
Unknown	19.07	19.87	18.40	18.97	18.47	18.14
Total	100.00	100.00	100.00	100.00	100.00	100.00

### 3. Distribution of Changes in Tax Liabilities: Winners and Losers

Clearly, the property tax liability for an individual parcel will differ across the various tax rate options. Table 29 shows how tax liability differs between the current tax rate structure and each of the five alternative rate structures. The table shows the average difference in tax liability for each of the five alternative rate structures for each of the 10 property value classes. For example, for the J\$200,000 to J\$300,000 value class, owners will, on average, experience an increase of J\$451 in tax liability if there was a switch to the flat rate tax, but a decrease of J\$764 if there was a switch to the modified flat rate tax. Note that Table 24 shows how the tax liability varies for specific parcel-values, while Table 29 shows the average difference for parcels within a value class.

**Table 29: Change in Tax Liability from Existing Rate Structures**  
(in J\$)

Value Class (in thousand J\$)	Rate Structure				
	Flat	Modified Flat	Moderate	Modified Progressive	Progressive
< 200	-64	-600	-200	-400	-600
200-300	451	-764	-224	-494	-694
300-400	627	-558	-319	-697	-897
400-500	722	-245	-481	-682	-1,163
500-750	1,220	600	-103	-898	-1,245
750-1,000	2,328	2,227	880	-410	-860
1,000-2,000	2,734	3,876	1,477	-22	-473
2,000-3,500	4,450	8,020	5,058	4,201	3,751
3,500-5,000	8,128	15,075	13,506	15,008	14,558
> 5,000	-121,310	-91,981	-58,810	-6,264	18,058

The five alternative rate structures reduce the tax liability for lower valued parcels. As should be expected, the reduction in tax liability extends across more value classes as the tax structure becomes more progressive, i.e., as one moves from left to right across Table 29. For example, the adoption of the flat rate tax would reduce the tax liability for parcels in the lowest value class, but increase tax liability for all other classes except the top class.

On the other hand, owners in the 7 lowest value classes would experience a decrease in tax liability while the top three classes would experience an increase. Because the rates for the highest value classes (i.e., over J\$5 million) are lower for four of the alternatives (flat, modified flat, moderate, and modified progressive) than for the current rate structure, these parcels would, on average, experience a decrease in tax liability under each of the four alternatives. Parcels in the highest value class would experience an increase in tax liability under the progressive rate structure as compared to the current structure since the rate for that class are the same for the two tax rate structures but there is a cap as part of the current rate structure.

Tables 30 and 31 show the number of parcels in each property value class which would experience an increase or a decrease in tax liability if a switch was made from the current tax structure to one of the five alternative tax rate structures. Table 30 shows this for all parcels while Table 31 shows this for residential property only. In general, all of the owners within a value class experience either a decrease or an increase, i.e., there are few value classes for which some owners experience an increase while others experience a decrease in tax liability. Those who experience a decrease in tax liability are considered “winners” while those who experience an increase are considered “losers”.

### **C. Rate Structures that Yield Increases in Revenue**

The above analysis assumed that the change in rate structure should be approximately revenue neutral in terms of tax liability; we ignored the issue of any changes in collection rates. In this section we consider several rate structures that would increase tax liability.

Interest has been expressed in the Ministry of Local Government to collect J\$3 billion in land taxes. We present four rate structures that would yield this revenue.

In determining the tax rates that would yield J\$3 billion in revenue, it is, of course, necessary to make some assumption about compliance. We assume here that the compliance rate will be 60 percent. In 2001-02, the to-date collection rate was 65.4 percent. While the collection rate for 2002-03 was much lower than that, 46.7 percent, as discussed below getting to a collection rate of 60 percent should be feasible.

**Table 30: Winners and Losers, all Parcels**

Value Class (in thousand J\$)	Rate Structures									
	Flat		Modified Flat		Moderate		Modified Progressive		Progressive	
	Winners	Losers	Winners	Losers	Winners	Losers	Winners	Losers	Winners	Losers
< 200	109,790	79,678	189,468	0	189,468	0	189,468	0	189,468	0
200-300	0	92,455	92,455	0	92,455	0	95,455	0	92,455	0
300-400	0	81,521	81,521	0	81,521	0	81,521	0	81,521	0
400-500	0	70,455	70,455	0	70,455	0	70,455	0	70,455	0
500-750	0	92,928	2,359	0	56,447	36,481	92,928	0	92,928	0
750-1,000	0	68,116	0	68,116	0	68,116	68,116	0	68,116	0
1,000-2,000	0	65,666	0	65,666	0	65,666	33,614	32,052	42,036	23,630
2,000-3,500	0	23,042	0	23,042	0	23,042	70	22,972	1,029	22,013
3,500-5,000	0	5,730	0	5,730	0	5,730	0	5,730	0	5,730
> 5,000	8,366	0	8,329	37	8,049	317	6,733	1,633	6,249	2,117
<b>Total</b>	<b>118,156</b>	<b>579,591</b>	<b>444,587</b>	<b>253,160</b>	<b>498,395</b>	<b>199,352</b>	<b>635,360</b>	<b>62,387</b>	<b>644,257</b>	<b>53,490</b>

**Table 31: Winners and Losers, Residential Property Only**

Value Class (in thousand J\$)	Rate Structures									
	Flat		Modified Flat		Moderate		Modified Progressive		Progressive	
	Winners	Losers	Winners	Losers	Winners	Losers	Winners	Losers	Winners	Losers
< 200	23,657	21,628	45,285	0	45,285	0	45,285	0	45,285	0
200-300	0	40,838	40,838	0	40,838	0	40,838	0	40,838	0
300-400	0	43,931	43,931	0	43,931	0	43,931	0	43,931	0
400-500	0	43,335	43,335	0	43,335	0	43,335	0	43,335	0
500-750	0	57,518	395	57,123	33,559	23,959	57,518	0	57,518	0
750-1,000	0	39,873	0	39,873	0	39,873	39,873	0	39,873	0
1,000-2,000	0	36,378	0	36,378	0	36,378	17,585	18,793	23,173	13,205
2,000-3,500	0	11,834	0	11,834	0	11,834	11	11,823	342	11,492
3,500-5,000	0	1,875	0	1,875	0	1,875	0	1,875	0	1,875
> 5,000	1,829	0	1,826	3	1,796	33	1,532	297	1,449	380
Total	25,486	297,210	175,610	147,086	208,744	113,952	289,908	32,788	295,744	26,952

To generate J\$3 billion in tax revenue with a 60 percent collection rate implies that tax liabilities would have to be J\$5 billion. To generate this tax liability using a flat tax rate would require a tax rate of about 0.9 percent, essentially doubling the flat tax rate in Table 23. Table 32 presents three other alternative rate structures that would yield approximately J\$5 billion in tax liability. Alternative 1 is a progressive rate structure, Alternative 2 is a moderate rate structure, while Alternative 3 is a modified flat rate structure. Alternative 3 closely resembles the modified flat rate structure described in Table 23, essentially doubling the tax rate. Alternative 1 is not as progressive as the progressive structure presented in Table 23, for example, the top rate is not double the top rate of the progressive rate structure described in Table 23. Alternative 2 is similar to the moderate and modified progressive rate structure described in Table 23.

**Table 32: Marginal Tax Rates (J\$3 billion in Revenue)**

Value Class (in thousand J\$)	Marginal Tax Rates		
	Alternative 1 <sup>a</sup>	Alternative 2 <sup>b</sup>	Alternative 3 <sup>a</sup>
< 200	0	J\$700	0
200-300	0	0.5	0
300-400	0.4	0.6	1.35
400-500	0.5	0.7	1.35
500-750	0.6	0.9	1.35
750-1,000	0.9	1.0	1.35
1,000-2,000	1.2	1.2	1.35
2,000-3,500	1.7	1.4	1.35
3,500-5,000	2.2	1.6	1.35
> 5,000	2.6	1.8	1.35

<sup>a</sup>There is no minimum tax and the tax rate applies to taxable value less J\$300,000.

<sup>b</sup>There is a minimum tax of J\$700.

Figure 8 and Table 33 shows the effective tax rate for each value classes. Table 34 shows the tax per parcel for each value class. For reference, we also include the effective rate for the current rate structure, where the effective rate for Figure 8 is actual

tax payments for each value class for 2002-03 divided by taxable value for each value class for 2002-03. It is clear that given the 2002-03 tax payments, there would have to be substantial increases in tax rates and the collection rate to generate J\$3 billion in property tax revenue.

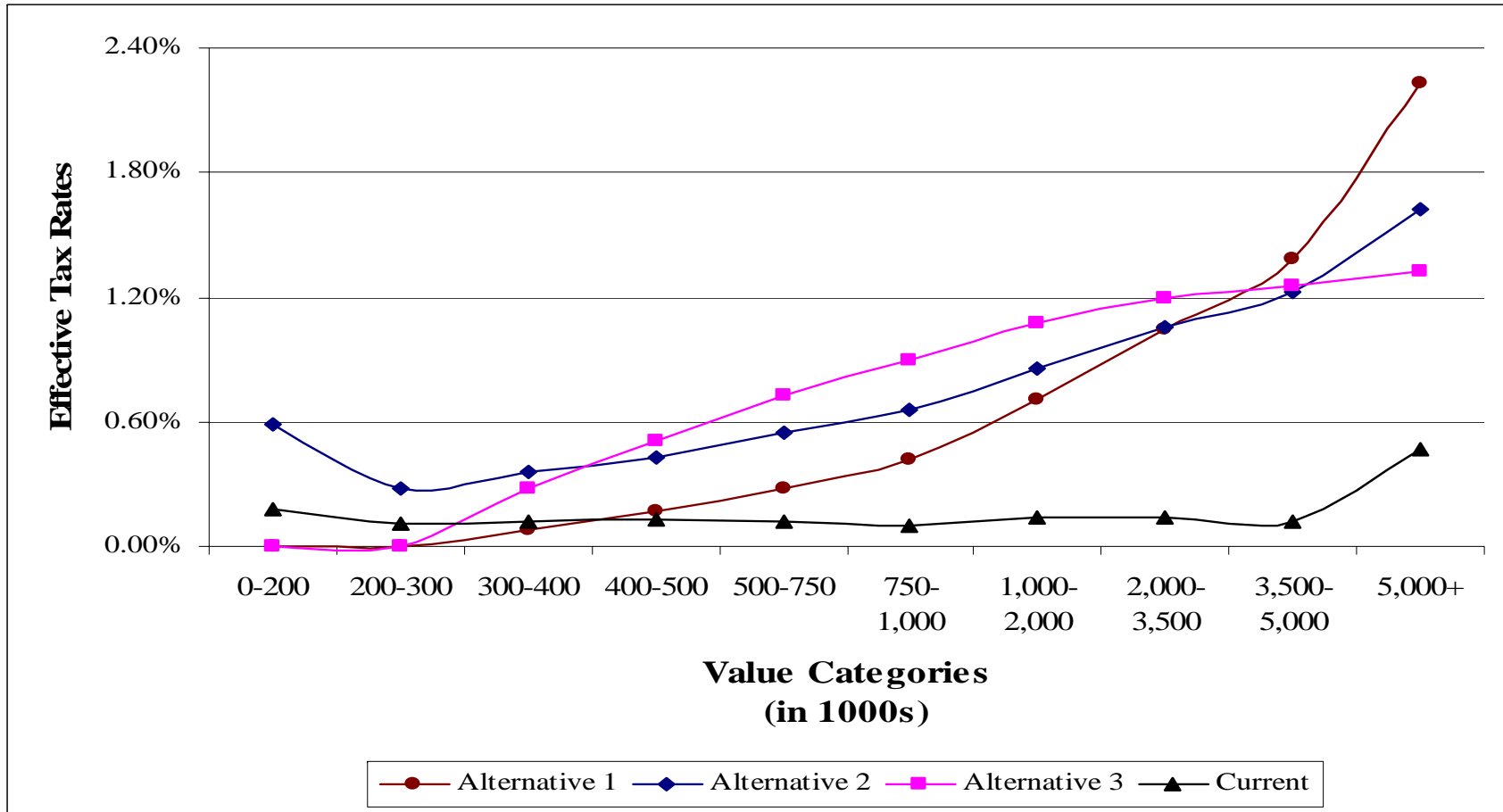
**Table 33: Effective Tax Rates**

Value Class (in thousand J\$)	Effective Tax Rates		
	Alternative 1 <sup>a</sup> (in percent)	Alternative 2 <sup>b</sup> (in percent)	Alternative 3 <sup>a</sup> (in percent)
< 200	0.0	0.59	0.0
200-300	0.0	0.28	0.0
300-400	0.83	0.36	0.28
400-500	0.17	0.43	0.51
500-750	0.28	0.54	0.72
750-1,000	0.41	0.66	0.99
1,000-2,000	0.71	0.86	1.08
2,000-3,500	1.04	1.06	1.20
3,500-5,000	1.38	1.22	1.25
>5,000	2.23	1.62	1.32

<sup>a</sup>There is no minimum tax and the tax rate applies to taxable value less J\$300,000.

<sup>b</sup>There is a minimum tax of J\$700.

Figure 8: Effective Property Tax Rates



**Table 34: Taxes Per Parcel (J\$ 5 billion in Tax Liability)**

Value Class (in thousand J\$)	Taxes Per Parcel		
	Alternative 1 <sup>a</sup> (in J\$)	Alternative 2 <sup>b</sup> (in J\$)	Alternative 3 <sup>a</sup> (in J\$)
< 200	0	700	0
200-300	0	751	0
300-400	314	1,371	1,059
400-500	808	2,072	2,453
500-750	1,785	3,527	4,690
750-1,000	3,706	5,901	8,033
1,000-2,000	10,486	12,786	16,016
2,000-3,500	27,581	27,952	31,630
3,500-5,000	58,667	51,962	53,336
> 5,000	332,788	242,315	197,224

<sup>a</sup> There is no minimum tax and the tax rate applies to taxable value less J\$300,000.

<sup>b</sup> There is a minimum tax of J\$700.

We also developed a progressive tax rate structure that produced a tax liability of J\$7.5 billion, essentially tripling the tax liability for the current tax rate structure. Table 35 shows the rate structure as well as the distribution of effective tax rates and the tax per parcel by value class.

**Table 35: Marginal and Effective Tax Rates (J\$7.5 billion in Tax Liability)**

Value Class (in thousand J\$)	Marginal Tax Rates	Effective Tax Rates	Taxes Per Parcel
	Alternative 4 <sup>a</sup>	(in percent)	(in J\$)
< 200	0	0.00	0
200-300	0	0.00	0
300-400	0.5%	0.10	392
400-500	0.75%	0.23	1,113
500-750	1.0%	0.42	2,724
750-1,000	1.5%	0.66	5,926
1,000-2,000	2.0%	1.16	17,227
2,000-3,500	2.5%	1.65	43,575
3,500-5,000	3.0%	2.06	87,523
> 5,000	4.0%	3.40	506,367

<sup>a</sup> There is no minimum tax and the tax rate applies to taxable value less \$300,000.

Table 36 presents the dollar tax liability for selected property values for the alternative rate structures modeled. Table 36 is equivalent to Table 24.

**Table 36: Tax Liability for Selected Taxable Values**

Value (in thousands J\$)	Tax Alternative			
	Alternative 1 (in J\$)	Alternative 2 (in J\$)	Alternative 3 (in J\$)	Alternative 4 (in J\$)
100	0	700	0	0
200	0	700	0	0
250	0	950	0	0
300	0	1,200	0	0
350	200	1,500	675	250
400	400	1,800	1,350	500
450	600	2,100	2,025	750
500	900	2,500	2,700	1,250
550	1,150	2,850	3,375	1,625
1,000	4,650	7,250	9,450	7,500
1,500	9,150	12,250	16,200	15,000
2,000	16,650	19,250	22,950	27,500
2,500	22,650	25,250	29,700	37,500
3,000	28,650	31,250	36,450	47,500
5,000	75,150	64,250	63,450	110,000
10,000	205,150	154,250	130,950	310,000
20,000	465,150	334,250	265,950	710,000
50,000	1,040,000	720,000	540,000	1,600,000
200,000	4,940,000	3,420,000	2,565,000	7,600,000

#### D. Flat Rate Structures

We considered four flat rate tax structures with an exemption of J\$300,000, the two reported in Table 23 (rate of 0.66 percent) and Table 32 (rate of 1.35 percent) plus flat rates of 0.085 percent and 1 percent. Figure 9 presents the effective rates by parcel value categories for the four tax rate structures and as well as for the current tax structure. Table 37 shows the effective tax rate while Table 38 shows the tax per parcel for each value class. The tax liability for these four structures are J\$2.43 billion for the 0.66

percent rate, J\$3.13 billion for the 0.85 percent rate, J\$3.69 billion for the 1 percent rate, and J\$4.98 billion for the 1.35 percent rate.

**Table 37: Effective Tax Rates (Flat Rate Tax)**

Value Class (in thousands J\$)	Effective Tax Rates			
	Flat Rate of 0.66% <sup>a</sup>	Flat Rate of 0.85% <sup>a</sup>	Flat Rate of 1.0% <sup>a</sup>	Flat Rate of 1.35% <sup>a</sup>
< 200	0.0%	0.0%	0.0%	0.0%
200-300	0.0%	0.0%	0.0%	0.0%
300-400	0.14%	0.18%	0.21%	0.28%
400-500	0.25%	0.32%	0.38%	0.51%
500-750	0.35%	0.46%	0.54%	0.72%
750-1,000	0.44%	0.57%	0.66%	0.99%
1,000-2,000	0.53%	0.68%	0.80%	1.08%
2,000-3,500	0.59%	0.75%	0.89%	1.20%
3,500-5,000	0.61%	0.79%	0.93%	1.25%
> 5,000	0.65%	0.83%	0.98%	1.32%

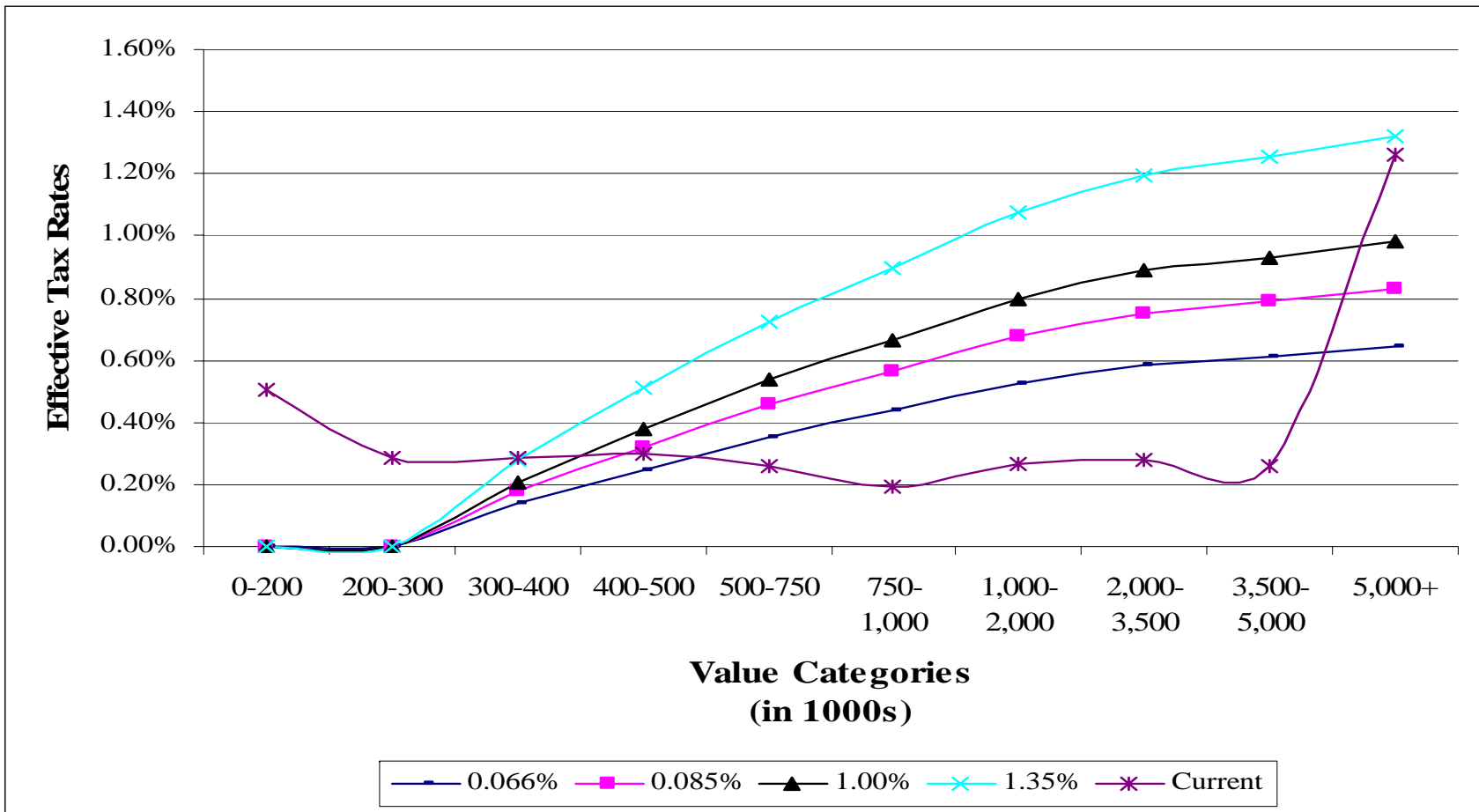
<sup>a</sup>There is no minimum tax and the tax rate applies to taxable value less J\$300,000.

**Table 38: Taxes Per Parcel (Flat Rate Tax)**

Value Class (in thousands J\$)	Taxes Per Parcel			
	Flat Rate of 0.66% <sup>a</sup>	Flat Rate of 0.85% <sup>a</sup>	Flat Rate of 1.0% <sup>a</sup>	Flat Rate of 1.35% <sup>a</sup>
< 200	J\$0	J\$0	J\$0	J\$0
200-300	0	0	0	0
300-400	518	667	785	1,059
400-500	1,199	1,544	1,817	2,453
500-750	2,293	2,953	3,474	4,690
750-1,000	3,927	5,058	5,951	8,033
1,000-2,000	7,830	10,084	11,863	16,016
2,000-3,500	15,464	19,915	23,430	31,630
3,500-5,000	26,075	33,582	39,508	53,336
> 5,000	96,421	124,178	146,092	197,224

<sup>a</sup>There is no minimum tax and the tax rate applies to taxable value less J\$300,000.

**Figure 9: Effective Property Tax Rates**  
 (Flat rate options with J\$300,000 exemption)



### **Increase the Collection Rate**

The one-year collection rate is quite low, 40.0 percent for 2003-04. A goal should be set to increase the one-year collection rate to at least 60.0 percent and hopefully higher, say 75 percent, with three years. Increasing the one-year collection rate means collecting more of the tax on time (recall that for 2001-02 the to-date collection rate was 65.4 percent) and increasing the number of owners who pay their property taxes. (In developed countries, a collection rate of 95 to 98 percent is typical.)

For every five percentage point increase in the collection rate, property tax revenues would increase by approximately J\$125 million. Increasing the collection rate could be accompanied by a reduction in tax rates; increasing the collection rate from 40.0 percent to 60.0 percent would allow tax rates to fall by 50 percent while still collecting the same amount of revenue. It is unfair to those who pay their property taxes for more than half of property owners to ignore paying their taxes. If there is a concern that there are property owners who cannot afford to pay, then it would be appropriate to set up a more formal relief program than the current discretionary relief program, or provide an exemption as described above. But it is not that it is only low income owners who do not pay their property taxes. As seen in the analysis of the collection rate in Chapter 2, the collection rate is low for parcels of all values, and on average, is lowest for parcels with the highest values.

There are several steps that could be taken to increase the collection rate.

- A first step is to make it easier for owners to pay property taxes. Rather than allow payment only at offices of Inland Revenue, provision could be made to allow for-profit collection agencies to receive payment. Such agencies already collect payment for electric utility bills. Owners could be encouraged to pay by mail by including a return envelope with the tax bill and a clear indication that a receipt will be mailed back to the owner. Consideration might be given to allowing electronic payments. Making it easier to pay the property taxes reduces the “hassle factor” in paying and should result in more owners paying and paying on time. For example, it is reported that at the time property

taxes have to be paid, there are long lines at the Collectorate offices. Providing options for how the property taxes were paid would eliminate the need to stand in these lines.

- An obvious step is to increase collections to reinstate the penalties and interest, which have not been imposed since 2001. It is reported that penalties will be re-imposed effective July 2004 and will be imposed retroactive to April 2002.
- Consideration should be given to increasing the interest rate that is charged on the unpaid balance. The interest rate that is specified in legislation is 15 percent, which, given the market interest rate in Jamaica, is too low. The Bank of Jamaica reports that the average lending rate as of February 2004 was 25.6 percent.<sup>25</sup> The commercial rate was 15.6 percent and the mortgage rate was 21.1 percent. With a market rate of 25.6 percent, property owners find it to their advantage to in effect borrow from the government rather than the bank. The interest rate on property tax arrears should be set at least two percentage points above the market interest rate. The penalty is currently 10 percent of the amount due, which is a reasonable penalty. However, it appears that if any amount of the tax liability is paid, no penalty is charged. The penalty should be imposed on the unpaid balance if full payment is not made by the due date.
- An option used elsewhere is to tie property tax payment to another type of payment. Some countries, for example, tie property tax payment to the payment of a utility bill, for example, the electric bill. This system works easiest if the utility is operated by the government, but that limits the option in Jamaica since only the provision of water is done by the government. This would work in Jamaica only if the government was willing to turn off one's water for non payment of property taxes. Furthermore, if the owner doesn't occupy the property, then it is the renter who bears the burden of not having water.

An alternative is to require proof of payment of property taxes in order to renew one's driver's license, business license, or obtain various permits. Denying someone a driver's license or business license because property taxes have not been paid would seem to be an action that would be accepted by the general public, unlike shutting off water. And, the withholding of taxes is already an accepted practice. It would be necessary to have a process that linked property tax payers to requests for licenses and permits. It is reported that such a procedure is under consideration by the government.

A more dramatic approach is that the government could require firms to withhold property taxes from a taxpayer's earnings in the same way that the firm withholds for the income tax. To implement such schemes would require that the Tax Report Number (TRN) for each owner could be established. Once the TRN of every owner was determined, there would still have to be a system in place that allowed the office that issues licenses to determine whether a TRN was associated with a parcel that was in arrears on their property taxes. Such a system does not currently exist, but could

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<sup>25</sup> Rates are reported on the Bank of Jamaica website, [www.boj.org.jm](http://www.boj.org.jm)

be implemented over time. There are problems with this approach. It is administratively costly, and it would not likely reach most of those outside the PAYE system. Furthermore, it would apply only to residential property.

The above options are not useful if the owner does not live in Jamaica. Thus, the government might consider requiring the renter of a property that is in arrears to make the rent payment to the government, which would recover property taxes along with penalty and interest. Such a proposal is reported to be under consideration by the government.

While these approaches could be quite effective in improving the rate of compliance, they also could impose some substantial establishment and administrative cost. These options may be most cost effective for owners of high-value properties or large property tax arrears.

- A common practice in the enforcement of property tax is to allow the government to foreclose on the property, including improvements, for which property taxes are in arrears. Foreclosure is considered an essential tool for property tax administration. Once the government has foreclosed, it can sell the property and collect the taxes, penalties and interest that are owed. While such action would be expensive relative to the revenue collected, particularly for low-value parcels, once such action has been taken it provides a credible threat to other owners, and thus may not have to be exercised very often.

We have been told that it is unclear whether the government has the authority to foreclose. The government has a foreclosure procedure spelled out in the Quit Rents Law, but that law does not address foreclosure for non-payment of property taxes. The Tax Collection Act does not mention foreclosure as an option. Thus, the first step in implementing a foreclosure procedure is to obtain a legal opinion as to whether the government has the power of foreclosure for non-payment of property taxes.

If the government does not currently have the power to foreclose for non-payment of property taxes, perhaps the easiest thing to do is to adopt the procedures outlined in the Quit Rents Law. While tax collection is important, it is also important that the taxpayer is treated fairly and in a legally sound manner. Thus, in any foreclosure procedure, much attention should be given to giving the taxpayer notice of the action being taken and opportunity to redeem the property.

- Another action the government might consider is taking temporary possession of the property until property taxes are paid. For example, if a business owed property taxes, the government would lock the business and not allow the use of the building until the property taxes were paid. Such action could be taken in conjunction with collection of other unpaid taxes. This action would be useful for only certain types of property. For example, it would work well for business property that had been improved. It would be easy to lock the property and post a guard to prevent the use of the building. On the other hand, such a procedure would not work well for agricultural land. For residential property, there is the concern about locking someone out of his or her home. But if the threat is credible, then it would not be necessary to use it very often.

One concern with this procedure is that the owner might not pay, trying to wait out the government. In such a case the government would have expended time and effort but gotten no return. Such occurrences are possible but not likely.

To implement such a procedure legislation would have to be adopted. The procedure might work as follows. First, once the government has determined that it should take possession of a property it would get a court order permitting it to do so. The government would serve notice to the owner that unless property taxes were paid within 14 days the government would take temporary possession of the property. During those 14 days the owner would either pay the taxes or work out a payment arrangement with the government. If the taxes were not paid, the government would go to the property and lock it, changing the locks if necessary, and posting a notice. A fine would be imposed if the owner used the property while in the possession of the government. If necessary the government would post a guard, or at least have a guard visit the property to ensure it was not being used.

### **Conduct General Revaluations More Frequently**

Waiting 9 or 10 years between revaluations has two main effects. First, it significantly reduces the income elasticity of property tax revenue. Second, it allows large inequities to arise since the relationship between assessed value and market value changes differentially by parcel. Third, it results in large potential increases in tax liabilities, i.e., fiscal shocks to the taxpayers when the revaluation is conducted. Thus, it would be desirable to conduct general revaluations every three to 5 years, the later being what is called for in the *Land Valuation Act*.

To get some sense of the effect of revaluing parcels every five years consider the following. First, assume that the increase in value over the period 1993 to 2002 was uniform over time and assume that 2001 values are substitutes for 1993 values. Assuming that parcels were revalued in 1998, and using the 1993 tax rate structure we find that tax liabilities in 1998 would have been 389 percent higher than in the absence of a revaluation in 1998. Actual tax liabilities would depend on changes the government made to the tax rates structure. The increase in tax liability estimated for 1998 is substantially smaller than the increase for 2002 based on the

1993 tax rate structure. This suggests that the adjustment in tax rates that might have occurred in 1998 as a result of a revaluation would be relatively less than what actually occurred in 2002. Thus, for the hypothetical 1998 revaluation, the government might have reduced the 1993 rates by a third. Since the dollar increase in tax liability for the 1998 revaluation would have been less than the increase for 2002, it is reasonable to assume that the decline in the collection rate as a result of a hypothetical 1998 revaluation would not be as dramatic as occurred in 2002. Assume a collection rate of 55 percent for the hypothetical 1998 revaluation. Based on these assumption, we calculate that the property tax revenue would have increased by 223 percent in 1998 over its actual level. While we cannot present evidence about the reasonableness of our assumptions, we think the analysis does imply that property tax revenue would be greater, and possibly much larger, if revaluations were conducted more frequently.

The 2002 general revaluation is estimated to have cost J\$110 to J\$115 million. This is about 4.6 percent of current property tax liabilities, and about 10 percent of property tax collections. But this cost can be significantly reduced. First, for the next general revaluations, the Land Valuation Division (LVD) will have the benefit of software which will significantly reduce the cost. Officials in LVD estimate that the revaluation could have been done for a third less if it had had the appropriate software in place. The costs could be further reduced if LVD had more ready access to sales data.

To ensure that a general revaluation is conducted at least every 5 years, the government could consider allocating J\$20 million from the property tax revenues to a special fund that would be available to conduct the next revaluation, which should be in 2007.

**Index Valuations between General Revaluations**

As noted in Chapter 2, there is little growth in property taxes between valuations because neither tax rates nor valuations are changed between general revaluations. We consider two ways of allowing property tax revenue to increase between general valuations. The first is to allow for an across-the-board increase in valuations based on the increase in the consumer price index. The second is to construct land value indices for large geographic areas.

To see the implications of adjusting taxable values based on increases in the consumer price index, we took the values prior to the 2002 general revaluation and increased them by the rate of inflation over the period 1993-2002. During that period consumer prices increased nearly 3 fold. The earliest year for which we have (assessed) land values is 2001. Thus, we are forced to assume that 2001 values are the same as the 1993 values. (Given that values are generally not changed except for general revaluations, 2001 values should be good approximations of 1993 values.) We increased the 2001 values for all parcels by the inflation rate. Based on the property tax rates imposed in 1993, the inflated land values would have increased property tax revenue by a factor of 4.12, or 312 percent. Since total land values actually increased 6 fold, increasing values by the rate of inflation between general valuations would have captured about half of the actual increase in value. In other words, if over the 1993-2001 period values were increased by the rate of inflation, there would have been smaller increases in taxable value required to get the values of parcels equal to 2002 market values, a 3-fold increase instead of a 6-fold increase on average. On average, the tax shock would have been much less and there would be annual increases in property tax liabilities.

To explore this a bit more, we took taxable values for 2002 and increased them by the rate of inflation for 2002 and 2003 and compared the tax liability with indexing with the tax

liability in the absence of indexing. We assumed no caps. For 2002, the CPI increased 7.3 percent while in 2003 it increased 14.1 percent. The result of indexing for those two years would be an increase in 2004 tax liability of 29.9 percent. This calculation ignores any increase in tax liability due to increases in taxable value due to subdividing parcels or other causes of changes in taxable value. Between 2002 and 2003, tax liability (ignoring the caps) increased by only 0.78 percent because of changes in taxable value due to factors such as the subdividing of property.

Increasing all land values by the same percentage does nothing to correct the differences between assessed value and market value that arise over time as a result of differential increases in the market value of properties. Table 39 shows by 2003 value class the percentage that inflation-adjusted 2001 values would have had to increase to reach the 2002 values. The smaller the required increase the closer the inflation adjusted 2001 values are to actual 2002 values. With the exception of the lowest value class the required percentage increase is generally negatively related to the income value class. In other words, an across-the-board increase in values between general revaluations results in high-value parcels being closer to market value before the general revaluation occurred. The tax shock of the general revaluation would be least for these land owners.

**Table 39: Percentage Increases Required to Achieve 2003 Values**

Value Class (in thousands J\$)	Percentage Increase
< 200	58.7
200-300	125.6
300-400	160.0
400-500	173.4
500-750	180.7
750-1,000	133.9
1,000-2,000	109.5
2,000-3,500	90.9
3,500-5,000	104.6
> 5,000	53.9

Using the increase in the CPI, or some other price index, would increase total tax liability each year and reduce the magnitude of the increases in value at the time of a general revaluation. However, as noted above such an indexing procedure does not reduce the inequality that arises when the market value of parcels increase at differential rates. To reduce this inequality requires that taxable value of each parcel change in portion to the change in the market value of that parcel. To do that fully means doing a revaluation such as was done in 2002, but more frequently. But it may be possible to make some adjustment as an intermediate step, as discussed below.

An alternative to an across the board increase is to construct an index of land value for each parish. The simplest way of doing that is to first determine the average price per square meter of vacant parcels that sold in a parish during a year. Taking the ratio of the price per square meter for two years would yield an index of the change in land value in the parish. The taxable value of each parcel in the parish would then be increased by this ratio. If there were a sufficient number of vacant land sales, it would be possible to refine this approach and make adjustments for smaller geographic areas. If the number of vacant land sales was small, an adjustment might be possible only every other year.

To explore this procedure, we took the 2001 values and increased them by the average increase in land value in each parish between 2001 and 2003. (Table 21 shows the increase in land values in each parish.) The adjusted 2001 values would be what one would get if the proposed procedure was adopted. We then calculated the coefficient of dispersion, using the adjusted 2001 values and the actual 2003 values. The resulting coefficient of dispersion is 1.35. Given that this coefficient of dispersion (CoD) is greater than the coefficient of dispersion reported above (Chapter 2), it suggests that trying to adjust land values by the average increase in

each parish results in greater inequities in valuation.<sup>26</sup> However, using an index of the increase in land values will mean that the assessed values in the year before the general revaluation will be closer to market value than if values are adjusted using the consumer price index.

It seems counter intuitive for coefficient of dispersion to be higher when parish specific increases are used than when an across the board increase is applied. However, this can occur. To illustrate, consider two parishes. Refer to the aggregate percentage increase in the parishes as the parish index, and the across the board increase for all parcels as the combined index. Suppose that in the first parish the percentage increase in value for low-valued parcels is higher than for high-valued parcels, while just the opposite occurs in the second parish. Assume that in the first parish more than 50 percent of the parcels increased by more than the parish index, while in the second parish less than 50 of the higher valued parcels increased by more than the parish index. The result is that using the parish index results in a majority of new values being further from the true value than if the combined index is used. Thus, the coefficient of dispersion will be larger using the parish index than the combined index.

Allowing values to increase between general revaluations would require an act of Parliament since such increases in valuation are not allowed. The alternative would be to adjust the tax rates each year by the percentage increase in the CPI. If the caps remain in place, each cap would also have to be increased by the increase in the CPI.

### **Improve the Availability of Sales Data**

Critical to the proper valuation of parcels are sales data. A general revaluation uses mass appraisal techniques, which rely heavily on the comparative sales approach to evaluating

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<sup>26</sup> We adjusted for outliers in several ways. Regardless of the adjustment, we find the coefficient of dispersion (CoD) to be larger when the adjustment is made using the increases by parish than an across the board increase. While it may be counterintuitive that the CoD is larger when the increases differ by parish, we can show by simple example that such an outcome is feasible.

property. To implement that approach requires good data on parcel sales.

There are three potential sources of sales data. First, the Title Office processes sales for a proportion of sales, i.e., those for which the title is registered. The Land Valuation Division (LVD) gets sales information from the Title Office. The data from the Title Office would be more useful if the Title Office was able to record the date of the sale, not just the date of the registration, since registration can occur several months and even years after the sale.

The Island Recording Office records deeds for those titles that are not registered. It would be desirable if LVD were able to get records of the deed recordings, including sales price, the date of the sale, and the land valuation number.

Property transfers are subject to the transfer tax, paid at the Stamp Office. For the 2002 general revaluation, the Stamp Office voluntarily provided sales data to LVD. At the moment however, the Stamp Office has refused to provide that data, and are not legally required to do. It would be desirable if the Stamp Office was required to provide records of transfers to the LVD. In addition, the usefulness of those data would be increased if the Stamp Office collected and recorded the land valuation number for the parcels. We understand why the Stamp Office cannot use the land valuation number to record transfers (each transfer needs a unique number and a parcel can be sold repeatedly), but it would be relatively easy for the Stamp Office to require the parties to provide the land valuation number. In fact, there is already a place for it on the transfer document. If transfer data from the Stamp Office were to be made available, the data from the other two sources would not be necessary since they would duplicate the Stamp Office data.

### **Relief and Derating**

Derating and statutory relief are of minor consequences in terms of lost revenue. There appears to be no major issue with these policies. Discretionary relief also has a small effect on property tax revenues. However, given the number of applications and the variability in the level of relief, it might be worth considering developing a more formal relief program. For

example, consideration could be given to a relief program that was limited to families with income below some relatively low level. The program could also be restricted to owners over a certain age, for example, 60 years. Relief could be set to that no eligible family pay property taxes in excess of some percent, say 0.1 percent, of the family income. Available data does not allow us to determine the number of eligible families or the cost of such a program in terms of lost revenue.

### **Land Value versus Capital Value Property Tax**

A land value tax has a number of advantages over a capital value tax. In particular, a land value tax does not discourage capital investment as a capital value tax would. While a capital value tax would have a much greater base, the underlying ability to pay of the owner doesn't change with a change in the base. Shifting to a capital value tax would be costly to develop, would require substantial lead time to put the information system in place, and would be more closely to manage. Thus, we do not suggest that Jamaica shift from its land value tax.

### **Central versus Local Control of the Property Tax Rate**

The property tax is a centralized tax with the revenue distributed to parishes based on where the revenue is collected. Jamaica could allow local government to set their own tax rates, as many countries do. If the tax remained a central tax, the revenue could be distributed using a formula, as some countries do, rather than on the basis of where collected. Jamaica may want to consider investigating these options. However, these are intergovernmental issues and are beyond the scope of this report.

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