

An Assessment of Land Taxation in PNG: A Case Study of Lae City

¹Jeffery Petrus, ²Jacob A. Babarinde, ³Lepani Karigawa

^{1, 2, 3}Department of Surveying and Land Studies, Papua New Guinea University of Technology,
Private Mail Bag Service 411, Lae, Morobe Province, Papua New Guinea

¹jeffreypetrus24@gmail.com, ²jacob.babarinde@pnguot.ac.pg, ³lepani.karigawa@pnguot.ac.pg

Abstract

This paper investigates land taxation challenges facing property owners as land tax payers and Lae City Authorities as tax enforcers in Papua New Guinea. Following deep concerns that the land taxation system in the city is grossly unsustainable, a representative stratified random sample of 150 land tax payers and selected city officials was interviewed between May and November 2019 in order to elicit primary data in addition to secondary data extracted from published city's land tax records. Gleaning from a rational, market-based valuation process for land taxation (Havard, 2001; Babarinde, 2011 and IVSC, 2019), as the conceptual framework, the study analyses data collected to answer three research questions. Highlights of data analysis and findings include a chi-square test producing a correlation coefficient of 0.379 at 0.01 significance level (2-tailed), which indicates a weak but positive relationship between land taxation system in Lae City and land taxation challenges from the tax payers' perspective. Key challenges facing land tax payers include, inconsistencies in land tax assessment, tax affordability issues resulting in tax avoidance, lack of consultation and awareness, manipulation of the land tax system by unscrupulous city officials, delays in updating the valuation roll, and excessively high land tax. A second chi square test performed for the relationship between the challenges facing Lae City Authorities as tax enforcers and the land taxation system produces a correlation coefficient of 0.487, which also indicates a positive but weak relationship at a significance level of 0.01 (2-tailed). In other words, the combined effect of these two findings is that the challenges facing both the tax payers and enforcers are adversely affecting the efficiency of the land taxation system in Lae City. Some of the key measures recommended by both land tax payers and land tax enforcers for improving land taxation system in Lae City include: outsourcing of land tax assessment and collection to a third party, imposition of tougher penalties on land tax defaulters, updating of the valuation roll and fiscal cadastre, introduction of supplementary valuation roll to capture increases in land value and increased awareness of land tax liability to property owners.

Keywords: Land Tax Assessment, Tax Base, Challenges, Unimproved Value, Lae City

1. Introduction

Tax is one of the different sources from which the government collects revenue. There are different types of taxes and land tax is one of them. Land tax is a tax that applies only to the land and not to the improvements on it. Land tax is the oldest form of revenue for the local

government and it is collected not only in Papua New Guinea (PNG) but also in other parts of the world. For example, in New Zealand, Land Tax is a tax levied by reference to the value of the land without reference to the value of the buildings or other structures built on the land and it is levied annually. Land tax is applied at 1% tax rate of the land value and is applied only to the unimproved value of the land (PADIRD, NZ, 2009).

In PNG, land is taxed twice (land tax and land rent) as prescribed under Section 83 of the Land Act 1996, where the land rent is collected by the Department of Lands and Physical Planning (DLPP) and the land tax is collected by the municipality in each of the provinces. Both the land tax and land rent are charged based on unimproved value of land where the unimproved value is calculated after every five-year period (Section 83, Land Act 1996). Land tax in PNG applies only to 14% of the land which is alienated land while the remaining 86% (Chandler, 2011) remains under customary land which is not subject to tax.

There are two ways in which land tax base may be calculated. They are area-based method and value-based method. Typically, area-based taxation applies in countries where property markets are evolving, or information systems are not well-developed to support a value-based system (RICS 2007). Under an area-based system, a charge is levied per square meter of land area, per square meter of building or sometimes a combination of the two (Bird and Slack, 2002).

The other method is the value-based method. There are three ways in which value-based method is used to calculate land tax; the first is capital improved value (CIV), the second, being income or annual rental value (ARV), and the third being land value (LV) or site value (SV). Value based assessments are those determined from the market place, 'being a price that would be struck between a willing buyer and willing seller in an arms-length transaction' (Mangioni, 2014).

In PNG, the land taxation system is based on the value-base system where the tax base is the Unimproved Value (UV) of the land. Generally, unimproved value is the site value of the land. PNG Valuation Act 1967 Section 1 defines Unimproved Value as follows:

In relation to land, means the capital sum that the fee simple in the land might be expected to realize if offered for sale on such reasonable terms and conditions as a bona fide seller would require, assuming that the improvements on the land (if any), other than ground improvements, did not exist at the date to which the valuation relates, less the Ground Improvements Allowance (if any) applicable to that land.

The Valuation Act 1967's definition of the land simply refers to the value of the land in its vacant state. Any improvements on the land during the valuation date must be ascertained and removed from the total value.

The land tax rate as applied based on UV and is as follows: In the National Capital District (NCD) the tax rates are: 3.2% for commercial and industrial lands. It is applied at 2.1% for residential and other lands (NCDC Release, 2013), while the land rent rate is 5% for all the state leases. The basis of land valuation for tax in PNG context is the Unimproved Value (UV), which is stipulated in Section 1 of the Valuation Act 1967. In Lae City, the land tax rate is 5% for commercial and industrial lands, while it is 2% for residential and other lands in Lae City.

The unimproved value is the land tax base for Lae City, PNG, which guides the Provincial Government in collecting and assessing land tax through the municipality. In this paper, the terms town or city authority, municipality and local level government are used interchangeably to denote the agency of the provincial government that is responsible for the assessment and collection of land tax in each main centre of the province. The town/city

authority, local level government or municipality is the arm of the provincial government that is in each main centre of the 22 provinces in PNG. One of their functions is to assess and collect land tax to provide municipal services to the people.

2. Nature of the Problem, Research Questions and Contributions to Knowledge

This study is an assessment of land taxation system in PNG focusing on Lae City as a case study. Land taxation system in Lae City, PNG, is ineffective despite the administrative body, laws/regulations, valuation roll and funds that are available to administer it (DLPP Momase Region Help Desk, 2018). A few reasons for the inefficiency of land taxation in Lae City include lack of a robust valuation roll, allegations of corruption in the Department of Lands and Physical Planning that prepares the Valuation Roll, poor service delivery by Lae Municipality and lack of equity and fairness in tax management. There are allegations made against the department (DPLL) as one of the most corrupt government departments in the country, which might be one of the reasons why the property owners are not fully paying land tax (DLPP, 2016).

Therefore, this paper seeks to critically examine these and many other challenges facing land taxation administration in Lae City, PNG, and suggest feasible solutions that are currently elusive. In specific terms, the paper attempts to lay out strategies for the local municipalities, provincial land boards, Department of Lands and Physical Planning and policy makers to implement policies for effective assessment, collection and management of land tax in PNG, using Lae City as a case study. To achieve the above stated objectives, the paper attempts to answer the following research questions:

- a) What are the land taxation challenges facing property owners in Lae City, PNG?
- b) What are the challenges militating against Lae City's capacity to generate enough revenue from land taxation for sustaining the city's public service delivery?
- c) What are some of the appropriate measures for improving land taxation system in Lae City specifically and PNG as a whole?

3. Conceptual Framework: A Rational, Market-based Valuation Process for Land Taxation

The conceptual framework adopted for this paper is *a rational, market-based valuation process for land taxation* (Havard, 2001; Babarinde, 2011 and IVSC, 2019), which starts from problem definition/identification and ends with the land tax itself. All the other factors like administrative and compliance costs, best practices and income generation potential of land tax are all considered and captured in the conceptual framework (Figure 1). The rational market-based valuation process is operationalised in this section.

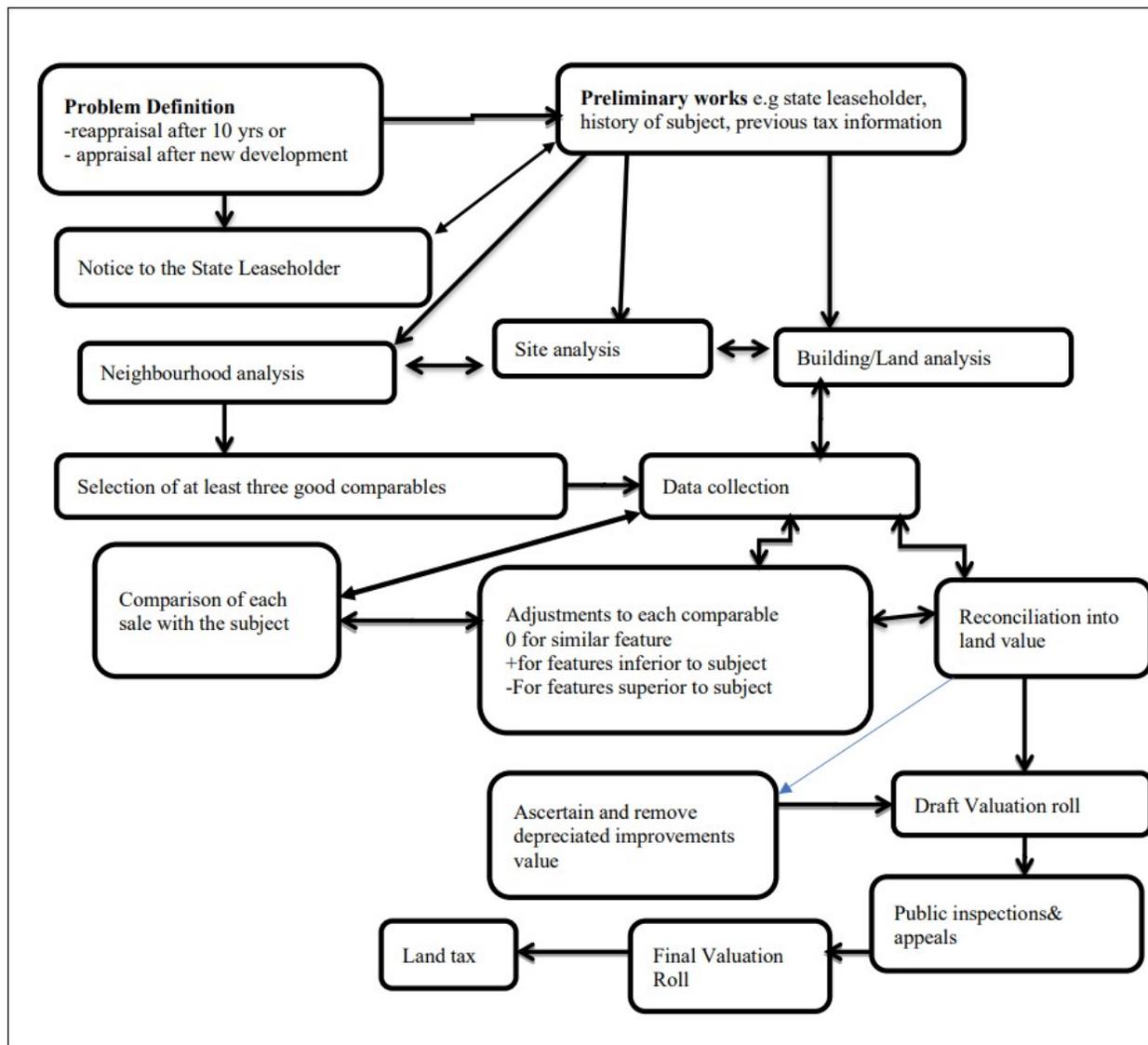


Figure 1: Conceptual Framework: A Rational, Market Based Valuation Process for Land Taxation (*Source: Adapted from Havard (2001), Babarinde (2011) and IVSC (2019)*)

The conceptual framework applies to the appraisal of properties every five-year period as stated in the Land Act 1996, Section 83 (3,4), and/or appraisal after new infrastructural development in the subject area to capture some or all of the increases in the value of real property (Kuranami, 1994). Once the problem is identified, the State leaseholder of the subject property is notified of the appraisal or reappraisal of the property for land taxation purposes. After the State leaseholder is notified, preliminary works like gathering previous tax information, history of the subject property, zoning, location and personal information about the State leaseholder are carried out. The location, site and building/land analyses tasks are carried out after the preliminary tasks.

While dealing with site, building and location analyses, at least three properties that are deemed comparable to the subject property are selected and necessary attributes of the comparables are examined to make comparisons with the subject property in terms of location, physical condition, building size, types of building materials and facilities prior to reconciliation into value. The reconciled value of vacant land is then assessed using the land tax rate to derive tax liability, which is entered into the valuation roll for collection of land tax. For any land with improvements thereon (improved property), the depreciated value of the improvements is ascertained and deducted from the reconciled value and the remaining value (land value) is then assessed for land tax using the approved tax rate and transferred onto the valuation roll for land tax collection. Prior to collection of land tax, the valuation roll is put out on public notice boards for public view/inspections and appeals where the property owners deem it necessary. After the public views and appeals, the final valuation roll is approved, gazetted and used for collection of land tax.

The management or administration of land tax is captured in this framework from the identification of the problem to land tax collection. The land tax administrator is the municipality or the authority responsible for assessment and collection of land tax in every jurisdiction. The municipality performs all the land tax administration tasks starting from the identification of the problem including reappraisal or value capture as a result of infrastructural development to the collection of the tax. The tax payers or property owners are parts of the system in the conceptual framework as well. The tax payers are involved when the valuation roll is published on the notice boards for purposes of public inspections, objections and payments of land tax annually.

4. Literature Review

At this juncture, it is necessary to examine some tax base and land tax principles with lessons drawn from other countries. Land tax is one of the various sources from which the government collects revenue. There are different types of taxes and land tax is one of them. Land tax is a tax that applies only to the land and not to the infrastructure on it. Land tax is the oldest form of revenue for the local government and it is collected not only in Papua New Guinea (PNG) but also in other parts of the world. For example, in New Zealand, Land Tax is a tax levied by reference to the value of the land without reference to the value of the buildings or other structures built on the land and it is levied annually. Land tax is applied at 1% tax rate of the land value. Land tax is applied only to the unimproved value of the land (PADIRD, NZ, 2009).

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There are two ways in which land tax base can be calculated. They are area-based method and value-based method. Typically, area-based taxation applies in countries where property markets are evolving, or information systems are not well-developed to support a value-based system (RICS 2007). Under an area-based system, a charge is levied per square metre of land

area, per square metre of building or sometimes a combination of the two (Bird and Slack, 2002). The other method is the value-based method. There are three ways in which value-based method is used to calculate land tax; the first is capital improved value (CIV), the second being income or annual rental value (ARV), and the third being land value (LV) or site value (SV). Value based assessments are those determined from the market place, 'being a price that would be struck between a willing buyer and willing seller in an arms-length transaction' (Mangioni, 2014).

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The Valuation Act 1967's definition of land simply refers to the value of the land in its vacant state. Any improvements on the land during the valuation date must be ascertained and removed from the total value. The land tax rate that is applied on the basis of UV is as follows: In the National Capital District (NCD), the tax rates are: 3.2% for commercial and industrial lands and 2.1% for residential and other lands (NCDC Release, 2013), while the land rent rate is 5% for all the state leases. In Lae City, the land tax rate is 5% for commercial and industrial land while 2% for residential and other land in Lae City. The basis of land valuation for tax in PNG is the Unimproved Value (UV), which is stipulated in Section 1 of the Valuation Act 1967.

5. Materials and Method

For this study, we obtained data and other relevant information through administration of two types of survey questionnaires – one for the property owners as land tax payers and the other for the city officials as land tax enforcers. Surveys are useful instruments for gathering information, data on attributes and preferences, beliefs and predictions, behaviours and experiences of both past and present stakeholders (Wisberg, 1996). The researchers did not rely entirely on primary data, but extra research was done to collect data from secondary sources as well. Secondary sources like the Internet, articles, newspapers, books and journals were also utilised to collect secondary data relevant to the research problem. Discussion and conclusions are made based on both primary and secondary data that had been collected and analysed using suitable statistical and quantitative (valuation) techniques. The researchers also collected some of the required data through field inspections or observations.

The sampling method used for this research is the stratified random sampling method. The total population of Lae City was first categorised into two groups as tax imposers (lands officials) and tax payers (property owners). A total of 150 representative, stratified random samples were interviewed (Table 1). The tax imposers are those government arms and other authorities who are undertaking the assessment and collection of land tax in the city, or have the potential to administer land tax, while the tax payers are all the state lease holders or other property owners in Lae City.

The questionnaire survey was also to collect data on payers’ and properties’ characteristics, tax payer’s profession, attitude, beliefs and perceptions about land tax in PNG from the viewpoints of both tax imposers and tax payers. All the questions asked were primarily set to acquire perspectives and views of the participants relative to land taxation. Furthermore, the questions were set to find out more information on the fiscal cadastre, valuation roll and land value capture in Lae City, penalties for land tax default by property owners, and modes of land tax payment. Also, part of the questionnaire included boards that provide utilities in Lae City. Other questions asked were on the administrative and compliance costs and the revenue generated through land tax in the previous years. The data collected from secondary sources were useful and carried the same weight as the primary data. It is too broad to do this type of research in all parts of PNG; however, the overall idea is the same. Therefore, the findings from the case study of Lae City will be applicable to other parts of the country as well.

Table 1: Sampling Frame and Sample Size for the Study

STRATIFIED RANDOM SAMPLING						
Sample Categories	Property Types			Total Population Sample	Total returned	Percentage Returned
Property Owners	Commercial	Industrial	Residential	500	140	28
	443	139	9,000			
Stakeholders (LCA, DLPP & IRC)	LCA	DLPP	IRC		10	100
	4	5	1	10		
TOTAL				510	150	

6. Results and Discussion

In this section, the findings of the study are presented in the order in which the research questions are outlined in Section 2 of the paper, as follows:

6.1 A reminder of our first research question: What are the land taxation challenges facing property owners in Lae City, PNG?

Property owners living in Lae City face different challenges when it comes to the payment of land tax. Below are some of the major land tax challenges faced by the property owners in Lae City (Figure 2).

The results in Figure 2 indicate six major challenges faced by property owners in Lae City as far as payment of land tax annually is concerned. Amongst the many challenges faced by the landowners, financial difficulties of regularly paying land tax is the most serious problem (27%), followed by inconsistencies in the land tax assessments with 25%, lack of consultation and awareness (21%), manipulation of the land tax system (12%), land tax being too high with 10% and delays in Unimproved Value (UV) roll update with 5%. The challenges faced by the property owners are a setback to the Lae City Authority (LCA) in generating property tax revenue to support its annual budget. A Pearson correlation analysis was performed on the issues

to test the relationship between the challenges and the Land Taxation System in Lae City, PNG, as shown in Table 2 below.

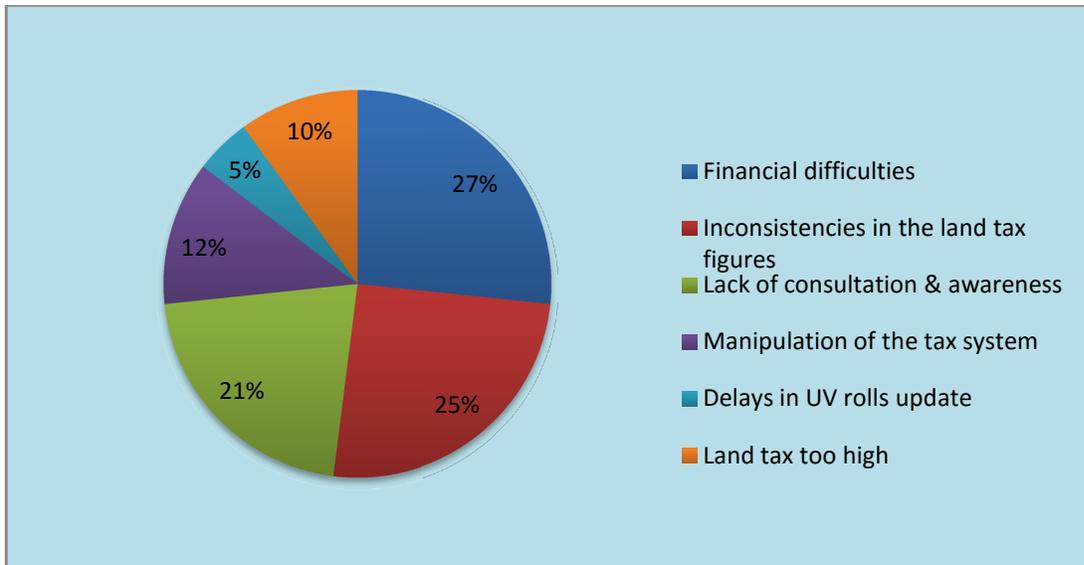


Figure 2: Land Tax Challenges Faced by Property Owners in Lae City

Table 2: Correlation Coefficient of Land Taxation System and Land Taxation Challenges Faced by Property Owners in Lae City

Variables	Correlation Coefficient	Variable 1	Variable 2
Common Challenges Faced by Property Owners	Pearson Correlation	1	0.379**
	Sig. (2-tailed)		1
	N	150	150
Land Taxation System	Pearson Correlation	0.379**	1
	Sig. (2-tailed)	1	
	N	150	150

** . Correlation is significant at the 0.01 level (2-tailed).

A correlation coefficient of 0.379** appears to indicate a weak but positive relationship between the two variables with a level of statistical significance at 0.01(2-tailed). Therefore, in the context of this study on land taxation system in Papua New Guinea, it can be concluded that the six challenges identified in Figure 2 above have a combined positive but weak influence on the land taxation system in PNG, which can be strengthened as improvements begin to take place in land taxation system. Resolving these challenges will result in higher chances of Lae City Authority generating enough revenue to support its budget annually.

With regards to the residential properties, there are different classes of people occupying them as owners. Some of them are working while others are retired and are not working. Even those property owners who are working have different commitments like school fees, medical expenses, household expenses and other expenses. Thus, exposing the residential property owners to financial constraints when it comes to payment of land tax makes it difficult for them to pay land tax. The land tax is paid at the beginning of the year when the budget of most of the property owners is very tight because they will send their children to schools. This worsens the financial constraints for most of the residential property owners with children.

Another challenge faced by the property owners is the inconsistency in the tax assessments. The assessment of the tax liability charged to all the leaseholders is not consistent among all the property types in the valuation declared area. Although it is true that different land uses have different land tax rates for calculating land tax, the land tax liability has not been consistent in the past years. According to the Lae City Council (2019), from 2015 and backwards, the land tax liability for each land parcel was not consistent thus making the land tax payment unsteady. The inconsistency in the land tax figures often confuse the property owners regarding what exact amount to pay each year thus aggravating the challenges they face.

Lack of consultation and awareness services is another challenge faced by the property owners in Lae City. There is no proper awareness of the land tax liability on each land parcel and the valuation roll is not properly exposed for public views and objections, thus leaving the land tax payers in the dark regarding the land tax liability on their land parcel/s.

Furthermore, land tax system in Lae City, and PNG, has been manipulated by some greedy land officials and agents for their own benefits. For example, accepting the land tax payment outside of the office and charging lower tax for their tribesmen are troubling. When other property owners see such shady practices (outside of office payments & lower rents for tribesmen) it discourages them from paying land tax.

6.2 A reminder of our second research question: What are the challenges militating against Lae City's capacity to generate enough revenue from land taxation for sustaining the city's public service delivery?

Challenges are the obstacles or barriers that prevent the Lae City Authorities from reaching their land tax collection goal. There are some challenges militating against Lae City's capacity in its drive to carry out effective assessment and collection of land tax. These challenges are indicated in Figure 3 below.

About 60 (40%) respondents indicated that early notices are not sent out to the property owners in advance; about 35 (23.3%) respondents indicated that Valuation Rolls have not been updated as required under the enabling legislation; about 21 (14%) stated that the penalties on defaulting property owners are not adequate; 15 (6.7%) opined that experts are not engaged by the LCA to carry out the UV assessments; and 20 (23.3%) argued that lack of funding from the government to perform UV assessments is also a serious issue.

It can be seen from Figure 3 above that one of the challenges militating against the smooth implementation of land taxation is the lack of early notices issued to the property owners. Property owners must be informed about land tax liability, the mode of payment and when the payment should be made. Lack of early issuance of notices will always hinder the proper collection of land tax when the property owners are unaware of their land tax liability. Another challenge is the lack of updated valuation roll. Valuation roll containing the land tax liabilities of

all the land parcels in the city must be updated on a regular basis, which is after every five-year period (Section 57, Valuation Act 1967), so that all the increases in the value of land could be recorded through value capture.

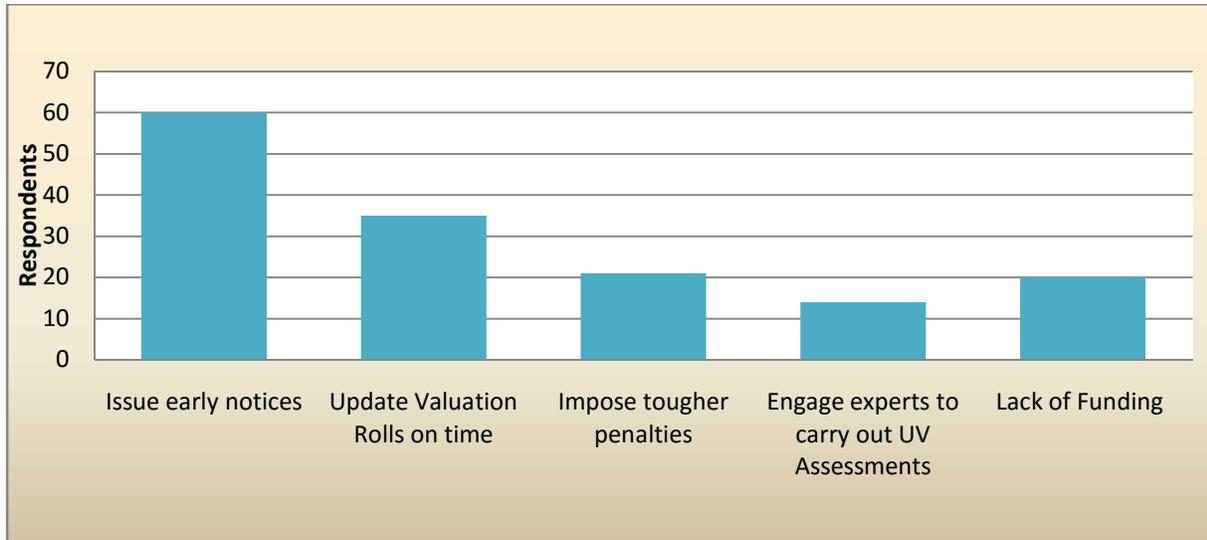


Figure 3: Challenges Militating Against Lae City’s Capacity to Maximize Land Tax Revenues
Source: Fieldwork, 2019

Under Section 122 of the Land Act 1996, there are statutory provisions for automatic forfeiture of the State lease in the event of non-payment of land tax for more than six months. Unfortunately, this penalty has not been enforced for many years; therefore, other tougher penalties must be applied against land tax defaulters.

Since the land officials and Lae City Authorities are allegedly manipulating the land taxation system through corruption, the land tax assessment and collection tasks may have to be outsourced to third parties. Lack of funding from the government is another challenge that is militating against the effective assessment and collection of land tax. Based on data in Figure 3 above, Table 3 below indicates the correlation analysis of the relationship between the land taxation system and the challenges facing Lae City as tax authority and enforcer.

Table 3: Correlation Analysis of Land Taxation and Challenges Militating Against LandTaxation from Tax Enforcers’ Perspective

Variables	Correlation Coefficient	Variable 1	Variable 2
Challenges Militating Against Efficient Land Taxation System	Pearson Correlation	1	0.487**
	Sig. (2-tailed)		1
	N	150	150
Land Taxation System	Pearson Correlation	0.487**	1
	Sig. (2-tailed)	1	
	N	150	150

** Correlation is significant at the 0.01 level (2-tailed)

A correlation coefficient of 0.487 (Table 3) appears to indicate a positive but weak relationship with a level of significance at 0.01 between the two variables. It is, therefore, contended that the challenges militating against efficient land taxation system in PNG from the tax enforcers' perspective can be avoided or minimized when and if efficient land taxation administration system is put in place.

6.3 A reminder of our third research question: What are some of the appropriate measures for improving land taxation system in Lae City specifically and PNG as a whole?

It is argued that issues hindering the cost-effective assessment and smooth collection of land tax in Lae City can only be resolved after proper research has been carried out. The following are some measures suggested by the survey respondents for effective assessment and smooth collection of land tax in Lae City and PNG as a whole. The respondents were asked to indicate their preferences.

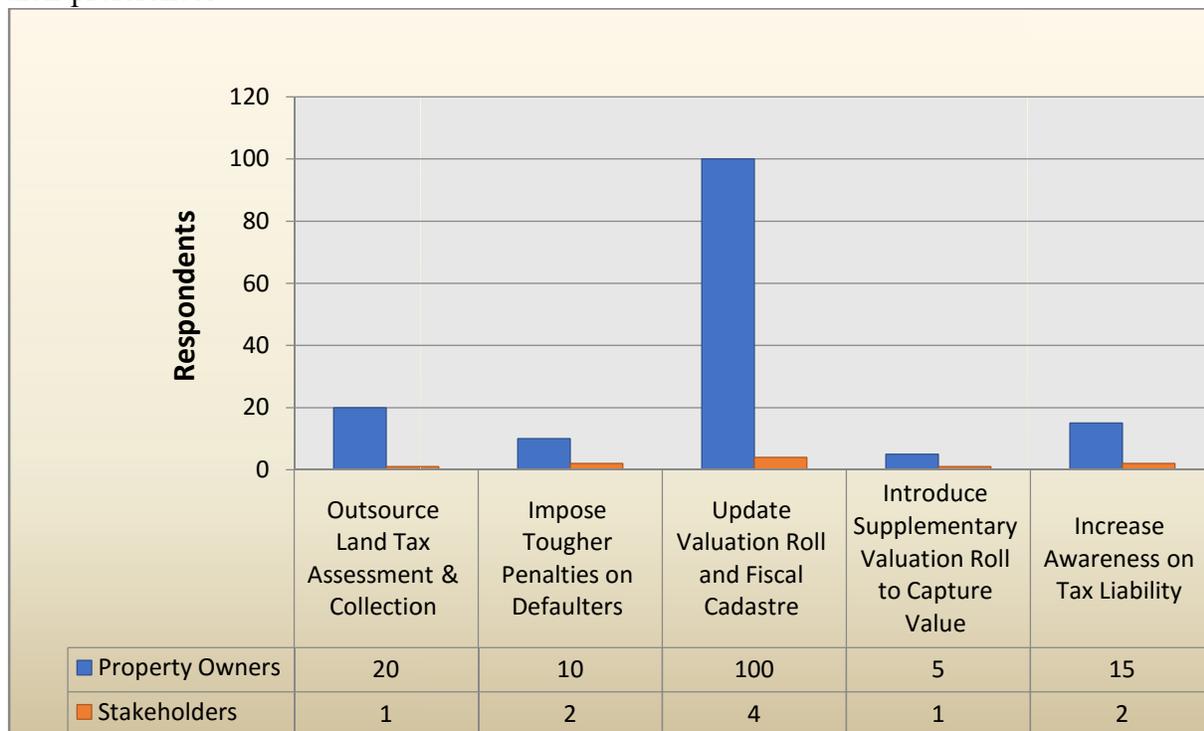


Figure 4: Suggested Measures for Improving Land Taxation System in Lae City

Survey findings based on Figure 4 indicate that 20 (33.3%) of the property owners and only 1(0.07%) stakeholder suggested that land tax assessment and collection should be outsourced indicating a weak support for outsourcing. Imposing tougher penalties on defaulters was supported by 12 (8%) of all respondents, while 104 respondents (69.3%) strongly argued that the UV rolls must be updated on time. Another 17 respondents (11.3%) believed that awareness must be done effectively on the actual land tax liability.

Outsourcing of land tax assessment and collection tasks to third party(ies) like Water PNG, PNG Power or other organisations will help improve the collection rate of land tax, which can increase the tax revenue for Lae City Authority and ultimately result in improved service delivery to people if the revenue collected is well managed. Another suggested measure for

effective assessment and smooth collection of land tax is the imposition of tougher penalties on the defaulting property owners.

Table 4: Correlation Coefficient of Land Tax and Suggested Measures for Improving Land Taxation in Lae City

Variables	Correlation Coefficient	Variable 1 (V1)	Variable 2 (V2)
Suggested Measures for Improving Land Taxation System in Lae City and PNG (V1)	Pearson Correlation	1	0.389**
	Sig. (2-tailed)		1
	N	150	150
Land Taxation System (V2)	Pearson Correlation	0.389**	1
	Sig. (2-tailed)	1	
	N	150	150

** . Correlation is significant at the 0.01 level (2-tailed)

A correlation coefficient of 0.389 (Table 4) appears to indicate a positive but weak relationship with a level of significance at 0.01 (2-tailed) between the two variables. It is contended that as appropriate measures are put in place and managed successfully, these will improve the land taxation system in Lae City and help generate more revenue for the municipal authorities to provide better infrastructure services to the residents.

7. Conclusion and Policy Implications

Land tax is one of the largest sources of revenue for the local government and it is collected in all parts of the world including Lae City, PNG. Land tax in PNG is only applicable to 14% of the entire land mass held under alienated land tenure, while 86% of the land remains under customary land tenure, which is not taxed. Land tax is calculated using the value-based method based on the unimproved value of the land (tax base) while the tax rates are 5% for commercial and industrial lands and 2% for residential and other land parcels in the city.

The entire nation uses unimproved value as the tax base while the tax rate is different in each main centre of the 22 provinces. This study focuses on an assessment of the land tax challenges faced by both the property owners (land tax payers) and lands officials at the Lae City Authority (land tax imposers), with a view to suggesting some measures for improving land taxation system in Lae City and PNG as a whole.

The study has answered three research questions. As revealed while answering the first research question, the land tax challenges faced by property owners in Lae City include: inconsistencies in land tax assessment, financial difficulties, lack of consultation and awareness, manipulation of the land tax system, delays in the update of the valuation roll and land tax being too high and unaffordable. The chi square test performed based on these findings shows a correlation coefficient of 0.379, which appears to indicate a weak but positive relationship with a level of statistical significance at 0.01 (2-tailed). Therefore, in the context of this study on land

taxation system in Papua New Guinea, it can be concluded that the six challenges identified in this research have a combined positive but weak influence on the land taxation system in PNG, which can be strengthened as improvements begin to take place in the system.

Apart from the land tax challenges faced by the property owners, the Lae City Authority (tax enforcers) also faces another set of challenges that militate against the land taxation system in Lae City, PNG. As revealed when testing our second research question, these challenges are as follows: lack of prompt tax demand notices to the property owners, late updating of the valuation roll, weak penalties against land tax defaulters, and lack of funds to carry out proper land tax assessment and tax collection. A chi square test performed shows a correlation coefficient of 0.487, which appears to indicate a positive but weak relationship with a level of significance at 0.01 (2-tailed) between the two variables.

Finally, some of the policy implications of the study for remedying the deficient land taxation system and making it effective are: outsourcing of land tax assessment and collection to third party (ies), imposing tougher penalties on land tax defaulters and regular updating of the valuation roll and fiscal cadaster. Others include introduction of supplementary valuation rolls to capture increases in land value and increased awareness on land tax liability to property owners.

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