

An Investigation into the Current Process and Procedures of Land Taxation System in PNG: A Case Study of Lae City

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Abstract

Land Taxation in Lae City, Papua New Guinea (PNG) is a value-based system where the unimproved value is the tax base for the entire country, while the tax rate is different in each province. In Lae City, the tax rate is 5% for commercial and industrial land and 2% for residential and other land. The common loopholes identified in this paper include: lack of implementation of penalties on land tax defaulters, lack of updated valuation roll, lack of updated fiscal cadaster, and the type of land tax payment in one year. Land tax revenue collected in Lae City has been steady between K5 and K6 million from 2007 to 2015 and has gradually increased after 2015. The increase in land tax revenue was caused by the updating of valuation roll in 2016 which was implemented in 2016. It is hoped that the land tax revenue will continue to increase in the coming years.

Keywords: *Land Tax, Penalty, Revenue, Tax base, Tax rate, Unimproved value, Valuation roll*

1. Introduction

Land taxation is one of the different types of taxes collected by the government. Land tax is a local tax and it is collected by the municipality (town/city authority) all throughout the world. The revenue generated from land tax is then used by the municipality to provide services to the people. Land tax is a tax that applies only to the land; as such it does not affect any investment on the land. The land tax creates a tax liability regardless of whether or how well one uses the land (PADIRD, NZ, 2009). Land tax is a local tax and is collected by the local government and the power to levy and collect tax is vested exclusively in the local government (PWC 2015), in each provincial centre of the provinces. The location of land determines whether land is taxable and how much can be fixed as tax.

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 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 in 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 of 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's (1967) 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 base is same all across the country but the tax rate may vary in each province due to peculiar financial needs of the province. In the National Capital District (NCD) the tax rates are: 3.2% for commercial and industrial land and 2.1% for residential and other land (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), as 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 land. In PNG, land tax only applies to the alienated land in the country which accounts for 14% of the entire land in the country while the 86% remains under the customary tenure (Chandler, 2011), where the land tax is not applicable.

2. Problem Statement

There are systems (laws/regulations, penalties, objectives) in place that protects the implementation of all the activities. The same principle applies to the land taxation in here in Lae City PNG, where it has its own laws that protects the implementation of the taxation system. Currently it can be seen that the current processes and procedures in the land taxation system in Lae City, PNG, is weak where some of the objectives are not fully implemented in the land taxation system. This makes the land taxation system weak where it affects the final revenue collection by the municipality.

According to DLPP in Lae City (2018), 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. Land taxation relies on the valuation roll. Lack or unavailability of the updated valuation roll prevent the effective implementation of land taxation function. Both the valuation roll the land taxation depends on the fiscal cadaster. Lack of land records in the city hinders the

progress of efficient land taxation system. This paper reviews the current land taxation system in PNG using Lae City as the case study where it identifies the loopholes within the land taxation system itself.

3. Rationale of the study and research questions

The purpose of this study is basically 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 collection and management of land tax in PNG, using Lae City as a case study. Findings from this research can be used to find solutions to the loopholes in land taxation system in the country where it will result in the increase in the revenue of the municipality.

This study answered the following two research questions. The first question, (a) How can we appraise the implementation of land taxation in Lae City, PNG, against its existing process and procedures? The second question, (b) What are the revenue generation potentials of land tax in supporting Lae City Authority's annual budget?

4. Literature Review

4.1 Different Acts in PNG That Give Rise to Land Taxation

In everything that we do on this planet earth, there is always a law/s that gives rise to it and protects it. There are laws that give rise to and protect land taxation system in PNG. Section 83 of the Land Act, 1996, specifies that, for all the state leases the land rent and rate/tax are calculated on the basis of unimproved value. The Unimproved Value is defined under Section 1 of the Valuation Act 1967 as follows:

Unimproved Value, in relation to land, means the capital sum that the fee simple of the land might be expected to realise 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.

A publication of the DLPP (2015) states that "The Office of The Valuer General" has the responsibility, under the Valuation Act (1967), to maintain the valuation roll for local-level government as earlier defined in Chapter 1 (town/city authority) for rating purposes. This function is carried out by the Rates and Taxes Branch, and by valuers stationed in Regional and Provincial Lands Offices. Currently, there are 22 local level government areas declared as valuation areas, under the Act and Lae City is one of them. Section 53 of the Valuation Act 1967 makes provision for the valuation roll to be prepared for all state leases for rent and rate/tax purposes and the state leases are to be revalued/reappraised every 5 years.

The PNG Constitution also makes provisions for land tax collection in each main centre of the provinces. Section 187C of the PNG Constitution of 1975 with Amendments through 2014, made mention of the functions of provincial and local level governments where it states in Subsection 4b of the same Section that the power to levy and collect land tax is vested exclusively in the local level government (town/city authority) in each main centre of the provinces.

4.2 Property Taxes

Different countries use different tax bases to calculate tax liability to be paid by the property owner. According to ITEP (2011), the tax base is all the items or activities subject to a tax, where the tax creates a liability for individuals or entities in possession of the items or doing the activities. In order for a person to pay tax, he/she must know the tax base to which the tax rate is applied to calculate the tax liability.

As stated by Harris and Moore (2013), property taxes are important sources of revenue for the local government and all local governments levy taxes on real property including land, commercial properties and residential homes, e.g. in the United States of America (USA). The effective property tax base rates are different or vary substantially state-by-state or region-by-region. In the USA the effective property tax base rate is below 1% of the house value and tax base is the market value of the property (Terry, 2013).

Property tax is also collected in the United Kingdom (UK). The local level government (municipality) collects property tax in the UK as an important source of revenue. As stated by Wightman (2013), property taxes in Britain are levied on the capital value of the property, including land and improvements on the land. In Australia, land tax is collected on the basis of unimproved value of the land. According to the Australian Government (2016), land tax is collected on the basis of unimproved value of land. Also, Section 4 of the Australian Land Tax Act 1936 specifies that the land tax base for Australia is the unimproved value. In New Zealand, the land tax is also collected by the local government. A land tax is a tax calculated against the value of land, without reference to the value of the buildings or structures built on the land. Land tax is levied annually, and in ordinary circumstances is expected to be paid annually (PADRID, NZ, 2009).

In PNG, the Land Act 1996 and the Valuation Act 1967 specify that the land tax base is the unimproved value of the land. Land tax is imposed annually by the provincial government through the town/city authority in the main centre of the province on the unimproved value of the land, and the power to levy land tax is vested exclusively in the provincial government. In Papua New Guinea, land taxation is difficult to implement and faces major geographical and social problems (FWO, 2016).

4.3 Economic Efficiency

Economic efficiency is the theoretical point where all resources are being used in the best interest of society. If an economy is operating at full capacity, an increase in the production of one good or service, say Good Y, must result in a trade-off and a drop in the production of another good or service, say Good X. In this scenario, the company manufacturing Good X would be hurt, (Geamanu, 2011). This principle is relevant to this study, and it is explained as follows (Richard and Richard 2010, p 7):

Land tax is a tax that applies only to the land. As such, it does not distort any economic development/investment on the land. A land tax is an efficient tax—it makes the economy more productive and thus creates wealth. Unlike other taxes where the tax liability changes as it passes from one person to another which creates extra tax burdens or “access burden” as stated by authors mentioned above. Land tax is efficient for the economy because it does not prohibit any

investment choices on the land and also the land is fixed in supply thus unaffected by the tax on its value. As such, a land tax is sustainable tax where it can cater for itself in the long run.

The theory of economic efficiency implies that, in order for an organisation to increase its products of one good or service, it must decrease its products of the other good/service. However, in the context of land tax, the tax on land does not distort any economic activity that is taking place on that land parcel. As such, a land tax can be considered as economically efficient.

Despite all the efficiencies of land tax in the economy, the main drawback is the reduction in land value which will be faced by the state leaseholder. The land value is reduced by the percentage (rate) at which the land is being taxed on. This is especially the case after the calculation of unimproved value (UV) where the final UV is reduced by the rate at which the tax is being calculated. A clear picture of it can be seen in the following example:

After the calculation of the unimproved value of the land, the land is worth K75 000.00. If the tax rate is 5% of the UV, the land value will be reduced by 5% of the total UV, and the owner is left with the 95% of the UV, which is K71 250.00.

4.4 Research Gap

Land Taxation System in Lae City, PNG, has necessary ingredients like regulations that guide land taxation, administrative body for administering land taxation, funds to execute the tasks and other ingredients that promote effective and efficient land taxation. Few areas that are lacking in the land taxation system in Lae City, PNG have been looked into to fill the knowledge gap in land taxation in Lae City, PNG: to make land tax assessment and collection effective and efficient which will result in increase in the revenue generation by Lae City Authority and other local municipalities, the following loopholes must be filled:

- i. Investigation in to the penalties of land tax defaulters
- ii. Mitigation of challenges facing the land tax in Lae City, PNG.
- iii. Investigation into the current status of the valuation roll and fiscal cadastre used by Lae City Authority to assess and collect land tax.

5. Research Methodology

This paper is an investigation into the current land taxation system in Lae City to identify the loopholes in the system. Most of the primary data collected were from survey questionnaire of 150 participants. The participants (150) were from the Department of Lands and Physical Planning (DLPP), property owners, Lae City Authority and Internal Revenue Commission in Lae. The sampling method used in this research was 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). Then, simple random sampling was performed for each group. After collection of all the completed questionnaires, the data were analysed using Statistical Package for Social Science (SPSS) and MS Excel. Table 1 below summarises the population sample and sample size for the study.

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	10	100
	4	5	1			
Total				510	150	

Source: Author 2019

6. Results and Discussion

6.1 Appraising Implementation of Land Taxation in Lae City Against its Existing Objectives

Below are some of the existing objectives of land taxation that guide implementation of land tax assessment and collection. The existing objectives were appraised by the research participants in the research questionnaires issued to them.

Results displayed in Figure 1 below indicate that there are problems associated with the implementation of land taxation system in Lae City, PNG. Opinions of the respondents indicate that there are high levels of inefficiencies in the implementation of the land taxation system coupled with other factors. About 120 (80%) of the respondents claimed that there is inefficiency in applying the penalties to defaulters with just 20 (13.3%) claiming there is efficiency in the land taxation penalties. The penalty for land tax defaulters is found in Section 122 of Land Act 1996, where it stated that automatic forfeiture of the lease in the event of non-payment of land tax for more than six months.

Regarding the valuation roll in Lae City, 80 (53%) of the 150 participants (100%) in Lae City argued that the valuation roll is efficient while 40 (26.7%) believed that the valuation roll is inefficient. Therefore, it is contended that the valuation roll in Lae City is efficient and can be used to collect land tax from all the State lands in the city but needs updating reappraisal every after not less than 5 years (Section 83 (3) Land Act 1996 and Section 56 Valuation Act 1967).

Fiscal cadastre is also one of the existing objectives that guides the implementation of land taxation system in the county. It can be seen from Figure 1 above that the fiscal cadaster in Lae City is inefficient as claimed by 135 (90%) participants out of all the 150 (100%) respondents. The other 10 (0.7%) participants stated that the fiscal cadastre in Lae City is efficient and can support the implementation of land taxation system in Lae City, but this number is insignificant as it is too low. It can also be seen that the mode of payment to be made on annual basis through bank deposit is efficient and was supported by 130 (87%) participants; 15 (10%) other respondents out of the 150 (100%) participants argued that the mode of payment is inefficient. Table 4.3 below shows the Pearson correlation analysis of land taxation and respondents' performance appraisal of the existing objectives of land taxation system in Lae City.

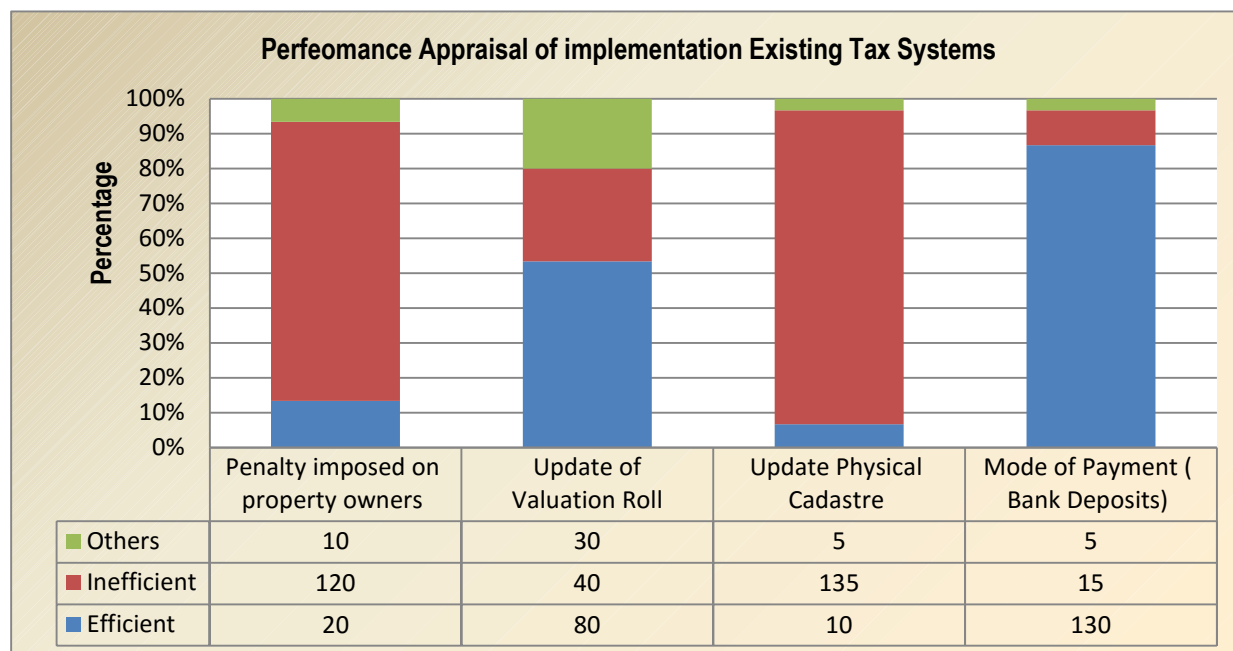


Fig. 1 Performance Appraisal of Land Taxation System in Lae City, PNG

Table 2. Correlation Analysis of the Land Taxation System and the Existing Objectives of Land Taxation

Variables	Correlation Coefficient	Variable 1 (V1)	Variable 2 (V2)
Performance Appraisal of Existing Land Taxation Systems	Pearson Correlation	1	0.489**
	Sig. (2-tailed)		1
	N	150	150
Land Taxation System	Pearson Correlation	0.489**	1
	Sig. (2-tailed)	1	
	N	150	150

Source: Author, 2019

The correlation coefficient of 0.489** appears to indicate a positive but weak relationship between the two variables with a level of significance at 0.01 (two tailed). Therefore, in the context of this study on land taxation system in Lae City, Papua New Guinea, it can be concluded that the improved implementation of the land taxation system in PNG can have better chances of Lae City Authority (LCA) generating higher revenues to support its annual budgets for providing quality services to the general public.

6.2 Revenue Generated from Land Tax and Other Revenues for Lae City Authority

Like any other sources of revenue, land tax in Lae City has the ability to raise revenue for the municipality. All the revenues collected from land tax are normally used to finance municipal services in Lae City which will in-turn enhance quality service delivery to the city residents. Below is the revenue collected from land tax compared with the city's annual budget from 2015 to 2019 with forecasting for 2020 and 2021 (Figure 2).

Figure 2 below indicates the annual budget of Lae City from 2015 to 2019. The money collected from different sources of revenue like company tax, government subsidy, etc., are put together as others, while those from land tax stand out alone in the budget.

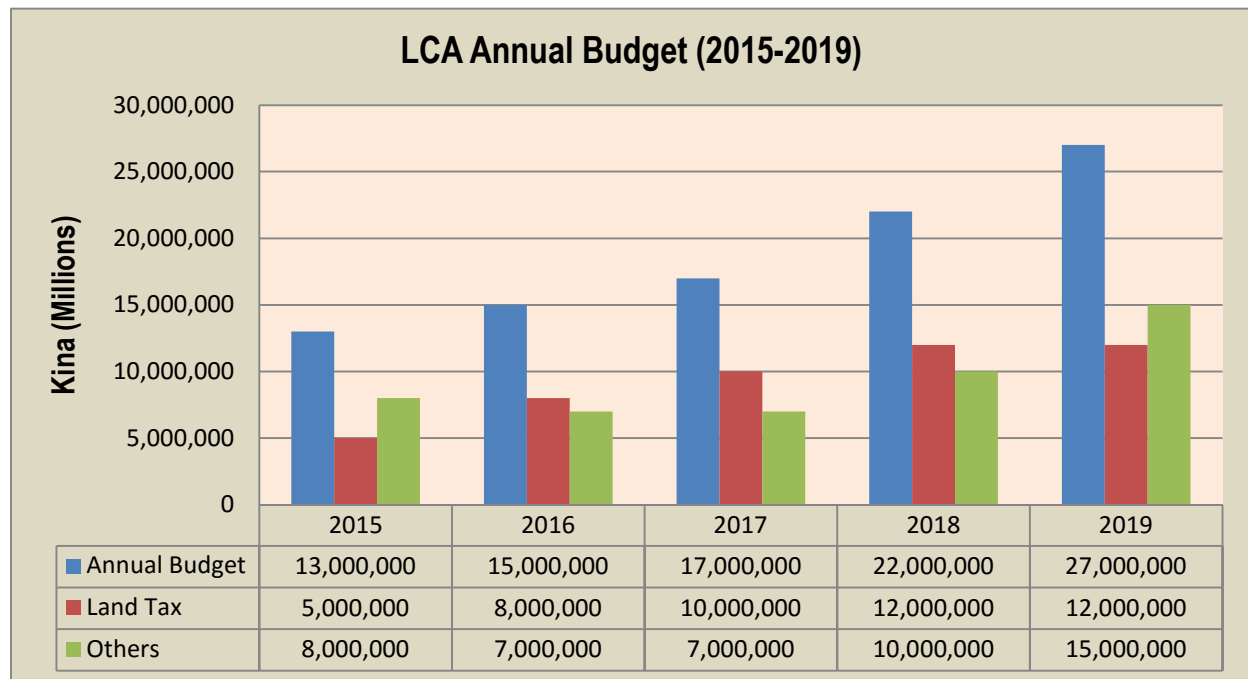


Fig. 2 Lae City's Annual Budget

Source: Lae City Authority (LCA), 2019

From the results in Figure 2 land tax is one of the major components supporting the LCA's annual budget with an average of about K6 million (about 46%) annually. From year 2015 to 2019, there is a gradual and steady increase in land tax in Lae City and it is hoped that as the challenges are resolved, LCA will generate more revenue annually.

Lae City Authority has different sources of revenue from which they collect money in any one year. From all the revenues collected through different sources, land tax alone accounts for almost half (46%) of Lae City Authority's budget in one year. Given this picture, it is contended that the municipal services provided by Lae City Authority (for Lae City) will be greatly impacted by the revenue collected from land tax alone. Logically, the quality of municipal services delivery in the city will increase when the money collected from land tax increases and vice-versa.

Land tax is collected from different land use types in the city. Though tax base is the same for all the land use types, the tax rate is different. Figure 3 below shows the revenue collected from commercial, industrial and residential lands in Lae City from 2007 to 2019.

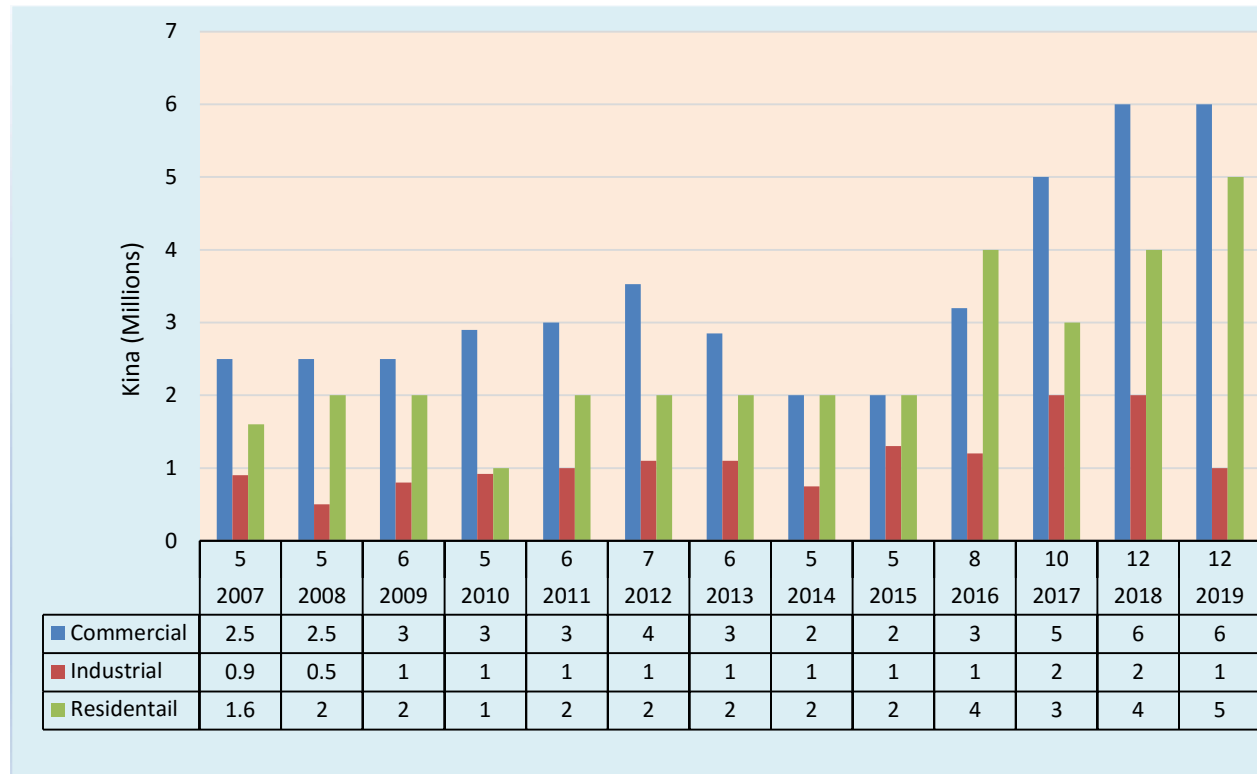


Fig. 3 Tax Collection from Different Land Use Types in Lae City (2017-19). *Source: LCA, 2019*

The results from Figure 3 indicate that the LCA generated about K5 million on average annually between 2007 and 2015, and land tax revenue increased gradually from year 2016 to year 2019. Generally, the low income generated from land tax is a result of UV roll not being updated from year 2012 to year 2015. The increase in the income is a result of the UV roll being updated in 2016. From the results, commercial and residential land uses are generating more income than industrial land.

It can be seen from Figure 3 that the revenues collected from land tax for different types of land uses in Lae City depend on the respective unimproved value (UV) of the land. It needs to be remembered that the tax base for all the land use types in Lae City is the Unimproved Value (UV) of the land while the tax rate for each land use type is different. According to the Lae City Council (2019), commercial and industrial lands charge five percent (5%) tax rate on the UV, while the charge is 2% on residential land and other lands like parks and schools in the city.

As can be seen from Figure 3 above, the revenue collected from commercial land in Lae City is greater than those collected from industrial and residential lands. The reason for this is that commercial land in the city pays land tax faithfully every year and the tax base is higher compared to residential and other lands. Furthermore, the number of commercial land parcels in the city is greater than that of the industrial land parcels. Following the revenue collected from commercial land is that of residential land. Though the tax rate (2%) for residential land is lower than that of industrial and commercial land parcels, the number of residential land parcels in the city is greater than both the industrial and commercial land parcels.

It should be noted that industrial land parcel collects less land tax compared to residential and commercial lands, and that the number of industrial land parcels in the city is less than the commercial and residential land parcels, although the tax rate is higher than that of commercial land. A scatter graph (Figure 4) with trend lines for land tax is shown to demonstrate how the three land uses compare and contrast.

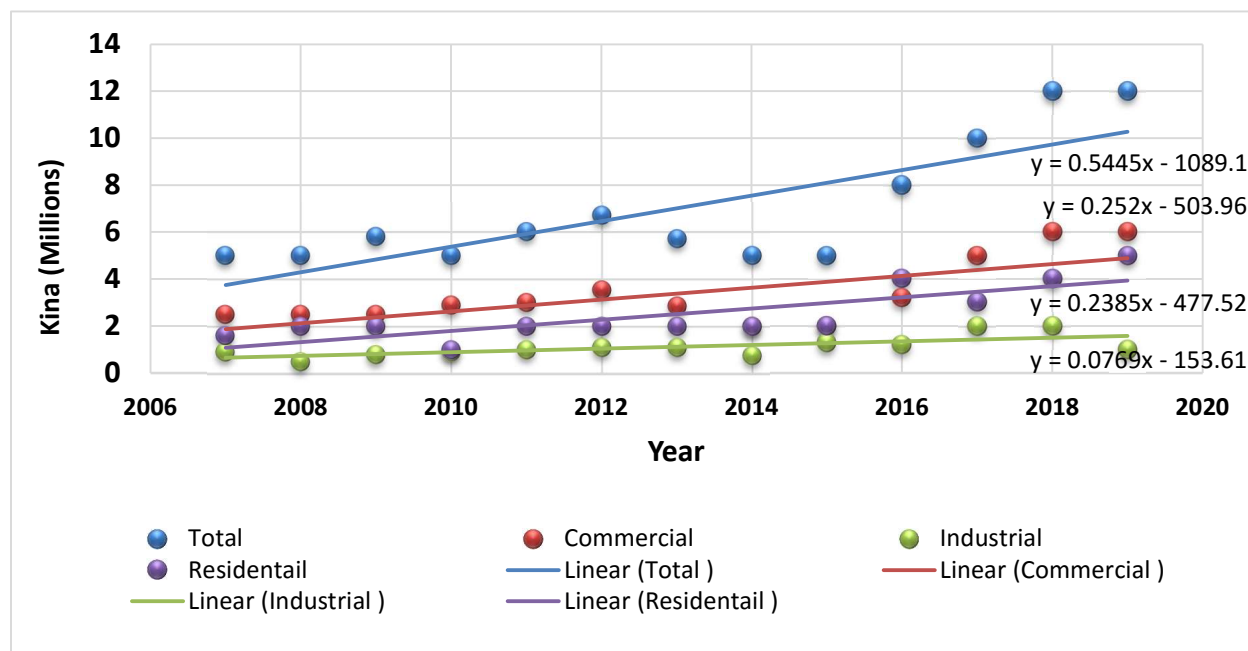


Fig. 4 Scatter Graphs for Land Tax in Lae City from 2007 – 2019

Source: Author, 2019

Looking at the revenue collected from each type of land tax, we can forecast the revenue that can be collected from land tax in the coming years. Table 3 below indicates the forecasts for the total revenue collection from land tax together with the forecast for land tax that may be expected to be collected from residential, commercial and industrial lands in the city (2020 -2024).

Table 3. Forecasting of Land Tax in Lae City (2020 -2024)

Land use type	Function/Equation	Forecast (Million Kina)				
		2020	2021	2022	2023	2024
Overall	$y=0.5445x-1089.1$	10.19	11.33	11.88	12.42	13
Commercial	$y= 0.252x-503.96$	5.08	5.33	5.58	5.84	6.09
Industrial	$y= 0.0769x-153.61$	1.73	1.81	1.88	1.96	2.04
Residential	$y= 0.2385x-477.52$	4.25	4.49	4.73	4.97	5.21

Source: Author, 2019

Table 3 indicates the projected overall revenue from land tax together with the revenue forecasts from each land use type in the city for each year. It can be seen that land tax collection revenue has been increasing slowly in the past years (Figure 4) and it will continue to increase gradually in the coming years once the issues identified in this research are corrected. The amounts provided in Table 3 above were estimated based on past data on revenue from Lae City Authority Office. Therefore, the actual amount to be collected will either be above or below the figures provided in Table 3 because they are forecasts that depend on certain assumptions. Two major assumptions are: that land tax payers and enforcers will live up to expectations in the years ahead and that the national economy of PNG will remain stable.

7. Conclusion

Land Taxation in Lae City, PNG, is value-based system where the tax base is the unimproved value of the land in the entire nation. The land rate varies in each main centre of the provinces. In Lae City, the land rate is 5% of unimproved value for commercial and industrial land and 2% for residential and other land in the city.

The common loopholes identified in the study that prevents the effective implementation of land tax in Lae City and PNG, generally include; lack of implementation on the penalty imposed on the default property owners. The current penalty for land tax defaulters is the automatic forfeiture of the State Lease for non-payment of land tax for not less than six months (Section 122, Land Act 1996), where it can be seen that it is not effectively implemented. The other loophole identified is the lack of updated valuation roll. The valuation roll contains on the necessary information needed for land tax. Lack of updated valuation roll creates inconsistencies in the tax assessment and figures thus making the land tax assessment and collection difficult. The update of the valuation roll must be done within the given time frame which is 5 years interval. Lack of updated fiscal cadaster is another loophole in the current land taxation system in Lae City and PNG as a whole. There needs to be a proper record of all the state land in all the towns and cities in the country where it will make land tax assessment and collection very easy. The Chi Square Test shows a correlation coefficient of 0.489** which appears to indicate a weak but positive relationship with a level of statistical significance at 0.01 between the two variables.

The revenue collection from land tax in Lae City has been steady from 2008 to 2015. After 2015, the revenue gradually increased because the valuation roll was updated and Gazetted in 2015 and it is hoped to increase in the coming years.

8. Policy Implications and Future Research

This research on land taxation is a broad topic where it requires attention from both the land tax administrators and property owners (tax payers) to work together for effective and efficient land taxation system in Lae City and PNG as a whole.

8.1 Government – Policy makers and Lae City Authority

The National Government should provide adequate funding to both Momase Regional Department of Lands and Physical Planning and Lae City Council to carry out the land tax assessment and collection exercise for the first year only. The money can be used to assess unimproved value for land tax. After that the municipality and Morobe Provincial Government can self-sustain

themselves with the money collected from land tax through different measures, like (i) impose tougher penalties of land tax default property owners, (ii) update valuation roll and fiscal cadastre of Lae City, (iii) introduce supplementary valuation roll, etc.

8.2 Property Owners

All the property owners in Lae City are urged to pay in full all the land tax liabilities in one fiscal year. Land tax alone is the major source of revenue for Lae City Council for which Lae City Council will in-turn use the money so collected to provide municipal services in the city

8.3 Future Research

Further research should be done on "Land Value Capture". This can be done to capture some or all of the increase in the land value because to infrastructural investments without owners' effort. The increase in the value will be added on the current land tax liability of the property owner for sustainable land taxation system in a value declared area.

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