UNIVERSITY OF NAIROBI

ASSESSMENT OF EQUITY IN PROPERTY TAXATION IN NAIROBI CITY: CASE STUDY OF RESIDENTIAL PROPERTIES IN BURUBURU, KILIMANI AND RIRUTA

BY

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B80/50148/2015

B.A. LAND ECONOMICS, MASTER OF URBAN MANAGEMENT,

REGISTERED VALUER

A Thesis Submitted for Examination in Partial Fulfilment of the Requirements for the Award of the Degree of Doctor of Philosophy in Urban Management of the University of Nairobi

May 2019

DECLARATION

I declare that this thesis is my original work and has not been presented elsewhere for examination, award of a degree or publication. Where other people's work or my own work has been used, this has been properly acknowledged and referenced in accordance with the University of Nairobi's requirements.

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ACKNOWLEDGMENT

This research would not have been accomplished without the contribution of various people. I am immensely grateful to my supervisors Dr. Owiti A. K'Akumu and Dr. Mary Kimani for their guidance, critique, and contribution to the completion of this thesis. I am also grateful to the School of Built Environment, University of Nairobi for the seminar reviews and contribution of the faculty members whose analytical contributions shaped this research. I acknowledge Dr. Raphael M. Kieti of Technical University of Kenya for reviewing my proposal and giving me guidance on how to proceed.

I am grateful to the Nairobi City County for allowing me to carry out the research in the County and availing the required data that was used in this research. I am indebted to the staff at the Directorate of Rating and Valuation including the Director, Mr Nyoike, and Deputy Director, Ms. Gyneth Magiri. I also appreciate the support of the Chief Accountant in charge of land rates, Mr Peter Muriithi. I appreciate the support of the staff in the Ministry of Lands, Housing and Physical Planning, including the Survey, Plans and Records Office for providing information of land registration numbers in the study areas and the Department of Land Valuation of availing information of sales comparable for the study areas.

I am also grateful for the opportunity to serve as a Property Valuer in the Department of Land, Housing and Physical Planning, Kiambu County which exposed me to the issues of land rating the in Counties in Kenya. I appreciate the support my colleagues accorded me during the study period. I am also grateful to Valuer Joseph Mwaniki for assisting me in data collection.

I am deeply indebted to my family for their moral support during the study period. I appreciate my husband, Simon Nyabwengi for standing with me and assisting in paying the fees; and my sons, Gilbert, and Victor Nyabwengi for their encouragement to complete the study when I wanted to give up. I am grateful to for the encouraging words of my mother, Serah Njeri Nguyo and my brothers and sisters which enabled me to soldier on and complete the study. Finally, I am grateful to God for providing me with the opportunity to carry out this research and availing the required resources.

DEDICATION

This research is dedicated to my husband, Simon Nyabwengi and my sons, Gilbert Nyabwengi and Victor Nyabwengi.

ABSTRACT

This research examines equity in local government property taxation in Kenya with Nairobi City as the case study area. Urban areas in Kenya are growing both in population and in physical extent. This rapid urbanisation especially in Nairobi has resulted in increased demand for urban services. Property taxation is a source of local government revenue that if fully exploited can supplement the provision of growing demand for urban services. Equity is one of the tax principles used to evaluate the performance of the property tax system. Though revenue generation is the main objective of property taxation, equity is also an important objective that has an impact on revenue generation. Equity in property taxation is impacted by the property tax base and coverage and valuation of the property tax base.

The main objective of this research was to assess equity in property taxation in Nairobi based on property tax base, its coverage and valuation or assessment. The research started with a review on literature on local government taxation and examination of best practices in the world. The literature review came up with the concepts that together with interview of key persons at the NCC, Department of Valuation was used to address the first objective which is to evaluate the property tax base and coverage in Nairobi.

Equity in property taxation is evaluated under the principles of ability to pay and benefit received. The value of a property acts as a proxy of the owner's ability to pay. Properties with higher values should therefore have higher taxes. Under the benefit-received principle, the value of public services provided by the local government in a neighbourhood is capitalized in the value of a property. The properties that benefit more from the public provided urban services enjoy high property values and should therefore pay high taxes. Property taxation should therefore capture the increase in property values that result from public expenditure in infrastructural services.

The study looks at the impact of the administrative process of property tax coverage and valuation or assessment on equity. The research evaluates the relationship between property tax and the value of the property which highlight whether there is uniformity in the valuation process. Equity was also assessed based on location of the property.

Vertical equity and horizontal equity were used to analyse taxation of properties in same location and different neighbourhoods. To examine the impact of property valuation on equity, the research used case study areas in Nairobi to achieve the objectives. The impact of property taxation on equity was evaluated by use of ratios.

The population sample comprised of residential properties in Kilimani, Buruburu estate and Riruta areas. These areas varied depending on the density of development as recommended by the planning regulations of the NCC, the level of service provision and consequently, the property values. Riruta area was under area rating while Kilimani and Buruburu areas were under site value rating.

The research used ratios to analyse data. It relied on ratio studies as used by International Association of Assessing Officers (IAAO) to evaluate equity in property tax administration. The relationship between value of the property and taxation was analysed by the ratio of assessed value to the market value. Where there is uniformity in valuation, this ratio should be equal to one. Horizontal and vertical equity is used to assess whether there is equity in property tax assessments of valuations of properties based on location. Coefficient of dispersion was used to evaluate horizontal equity while price related differential was used to assess vertical equity. To compare property taxation between site value rating (Buruburu and Kilimani areas) and area rating in Riruta area, effective tax rate was used.

Some of the major findings that impact on property tax equity includes use of different regimes as the tax base namely Unimproved Site Value (USV) and area rating, numerous exemptions and omissions from taxation, lack of laid down procedures on updating of the valuation roll and an out-dated valuation roll that has no relation to current market values. On assessment of equity, though there is uniformity in the valuation for the areas under USV rating, there is no vertical equity. High value properties are assessed favourably as compared to low valued properties. The Effective Tax Rate (ETR) is also higher for the lower valued properties. The study has recommended that Nairobi City adopts improvement rating to capture the values of the properties, adopts one regime of taxation and regularly updates the property values to benefit from increase in revenue because of rising property values in the City.

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List of Abbreviations

ASCC	African Statistical Coordination Committee
COD	Coefficient of dispersion
CGs	County Governments
GDP	Gross Domestic Product
GIS	Geographical Information System
OECD	Organisation for Economic Co-operation and Development
IAAO	International Association of Assessing Officers
IVSC	International Valuation Standards Council
KNBS	Kenya National Bureau of Statistics
MLPP	Ministry of Lands and Physical Planning
NACOSTI	National Commission for Science, Technology and Innovation
NALAS	Network of Associations of Local Authorities of South-East Europe
NCC	Nairobi City County
NCWSC	Nairobi City Water and Sewerage Company
PRD	Price related differentials
RA	Rating Act
ROK	Republic of Kenya
RSA	Republic of South Africa
SID	Society for International development
USA	United States of America

USV	Unimproved site value
UN- Habitat	The United Nations Human Settlements Programme
U.K.	The United Kingdom
VRA	Valuation for Rating Act

"The expenses of government, having for their object the interest of all, should be borne by everyone, and the more a man enjoys the advantages of society, the more he ought to hold himself honoured in contributing to those expenses." Anne Robert Jacques Turgot (1727-1781). www.econlib.org

CHAPTER 1 : BACKGROUND AND CONTEXT TO THE STUDY

1.1. Introduction

The aim of this study was to establish the extent of equity in property taxation at the local government level in Nairobi City in the context of urban management. The study evaluated the impact of the tax administration processes on equity in property taxation. These processes include the property tax base and the property assessment or valuation processes. The result of this research can be used to evaluate equity in local property taxation in other urban governments in Kenya.

Property tax is an annual tax imposed by local authorities either on land, buildings, or both (Ulbrich, 2011, Hyman, 2011). The tax bases on which the tax is imposed differ in the world and can be on capital value, vacant site/land value or annual rental value. In some counties such as US, property tax is charged on land and the improvements that are on the land as an *ad valorem tax* imposed at a certain percentage of the assessed value of property (Ulbrich, 2011, IAAO, 2012). The different types of tax bases are discussed in Chapter two.

It is argued that property tax is one of the taxes on wealth since ownership of property is acquired through savings and investments, and through gifts and inheritance (Hyman, 2011). Ownership of property is mainly for future anticipated incomes and the use of property as collateral for loans indicates that there is a link between wealth and property ownership (IAAO, 2010). Through property taxation, the government can tax this form of wealth and ensure balance and equity in the tax system (IAAO, 2010).

Equity is the quality of being fair and impartial and is concerned with justice in the society (The Oxford dictionaries, 2019; Hardwick *et al*.1999). All societies in the world have some norms or rules of sharing goods and burdens among the members of the society (Young, 1995; Hardwick *et al*. 1999 and World Bank, 2005). Young (1995) notes that equity is about the rules of distribution and the principles used to justify the rules. Equity in property taxation is concerned with the fair distribution of the tax burden among the taxpayers (Ulbrich, 2011).

Most societies the world over have rules on distribution of resources and taxation. The rules mainly form part of the legal or administrative systems. Chapter 12 of the Constitution of Kenya, 2010 requires that the administration of public finance in the Country ensures equity or fairness in the distribution of the tax burden. Therefore, equity is an important aspect of public finance both at the National and Local government levels.

Equity in property taxation is evaluated under two theories; the ability to pay and the benefit received (Ulbrich, 2011). The measure of ability to pay under property taxation is the market value of the property. Equity in property taxation is further evaluated under horizontal and vertical equity. Under horizontal equity, properties with the same market value should be assessed equally and charged the same tax while under vertical equity low valued properties should pay less tax and vice versa (Plimmer *et al*. 2000). The practice is that properties in low-income areas should pay less tax than the high-income areas (IAAO, 2010). This supports the principle of benefit received.

Plimmer *et al*. (2000, p.7) notes that fairness or equity in property taxation should "be related to the legislation upon which the tax is promulgated." Equity should therefore have some legal basis which should clearly specify the system of taxation in terms of the tax base, the forms of assessment or valuation methods to be adapted and if there is to be any exemptions.

The administration of property taxation system impacts on revenue adequacy and equity (Kelly, 1999). For there to be equity in property taxation, the assessed values upon which the tax is based should be related to the market values and this is achieved by carrying out regular revaluations of the property (Plimmer *et al*. 2000).

Revenue generation is the main objective of property taxation (Bahl and Linn, 1992; Ulbrich, 2011). Through this objective, property taxation redistributes goods and services from the private sector to the public sector (Hyman, 2011). Governments require the revenue for provision of services both at the national and at the local government levels.

Taxes redistribute the government burden of provision of goods and services to its citizens. There should therefore, be equity and fairness in the taxation process. The process should be politically acceptable and should not cause undue distortion to the economy (Bird,

2005). The redistribution or sharing of the tax burden is the equity objective of taxation (Ulbrich, 2011).

1.2. Background to the study

Property tax at the local government level is a recurrent annual tax and is a major source of local government revenue in major cities of the world (Balh and Linn, 1992). In developed countries, it comprises a significant percentage of local governments own source revenue amounting to 37.7 % in Australia, 53.3 % in Canada and 33% in United Kingdom (Bird and Slack, 2005). In the developing counties, its contribution to own source revenue is lower, at 15 % in Kenya and 21% in South Africa (Bird and Slack, 2005). Property taxation at the local government level is a major source of local government revenue (Balh and Linn, 1992). This is important for service provision by local government especially with the on-going devolution of power and resources to the County Governments in Kenya.

Property taxation has advantages over other local taxes in that it is immobile and it cannot relocate to other areas with lower tax rates, unlike tax on income where higher taxes can lead to relocation to lower tax jurisdictions. Property tax is argued to be a reliable source of local government revenue under decentralisation because the local government has the autonomy to decide on the tax base and the tax rate.

Kenya's Vision 2030 aims to achieve economic development and to transform the country into a "newly industrialising modern middle-income Country providing a high quality of life for all its citizen by the year 2030" (ROK, 2007, p. 1). The country requires resources to achieve this objective and taxation is one of the sources of revenue. Taxation should follow the equity principle to ensure that all citizens who own property pay taxes. Taxes should be paid according to the value of the properties and those who benefit more from service provision should pay more taxes. Where this is adhered to the property tax system is fair.

Statistics reveal that Kenya is a country of great wealth inequality. SID (2004) using data from Integrated Labour Force Survey, 1998/1999 by KNBS, reveals that the distribution of income and wealth in Kenya is in favour of the rich with 42% of the country's total income controlled by 10% of the households. Gakuru and Mathenge (2012), notes that

Kenya's gini coefficient increased from 0.419 in 1997 to 0.459 in 2005-06. It was 0.4 in 2009 against that of South Africa at 63.1, Uganda at 44.3 and Nigeria in 2010 at 48.8 (ASCC, 2014). The gini coefficient is a statistical measure of income inequality of a population (Ulbrich, 2011). A higher level of gini coefficient indicates greater degree of income inequality. The country therefore faces high levels of poverty, inequality in income distribution and inequalities in development among regions (ROK, 2008).

Though taxation is a main source of government revenue, it can also be used to achieve other social objectives in the economy. Such social objectives include wealth and income redistribution and regulation or encouragement of some practices (Mutua, 2011).

According to Todaro and Smith (2009) for a country to attain economic development there is need for equity taxation. They note that high degree of inequality inhibits economic development and leads to most of the population feeling marginalised. This can affect social stability in a country. Equitable taxation is also necessary under the system of fair and just society.

A study done in OECD countries has shown that recurrent taxes on "--immovable property is the least distortive tax instrument in terms of reducing long run GDP per capita followed by consumption taxes and other property taxes..." (OECD, 2010, p. 21). Therefore, increasing recurrent tax on property leads to minimum distortion of the economy compared to other taxes such as value added taxes and taxes on consumption goods. However, in Kenya the current emphasis has been to increase tax on rental income with little emphasis being put on annual property taxation.

Equity is therefore an important objective of taxation which impacts on the level of revenue raised. Where equity in taxation is not adhered to, it results to all the properties not being taxed in an equitable way. A property taxation system that is deemed to be fair by the taxpayer is bound to be accepted. This will result to better tax compliance, further enhancing the revenue collected. As seen above, equity is about being fair and impartial. A system that adheres to this will be acceptable.

Equity in property taxation can also be enhanced through broadening of the tax base (OECD, 2010). This ensures inclusion in the tax base of most of the properties within the taxing jurisdiction. This also has the advantage of increasing revenue collection. It can also result in lowering of the tax rate which will enhance compliance on tax payment.

Property taxation by the local governments in the world differs depending on the tax base. There are about four systems of property taxation at the local level in the world (Norregaard, 2013). These are annual rental value, capital value, site value or land value and area-based systems. The main difference in the systems is the tax base. Annual rental value and the capital value systems have the tax base as the land and the improvements thereon. The annual rental value taxes the income from the property while the basis of capital value is the market value of the property. The basis of the site value system is the market value of the unimproved site. This is currently practiced in Nairobi County together with area rating for the suburb areas that are supposed to have inadequate service provision.

Monkam (2010) notes that property taxation is underutilised and neglected in most developing countries including Kenya due to political and vested interests. Shoup (1978) notes that in most developing countries, most of the prime commercial and residential urban properties are owned by important government officials and influential families. They are therefore able to influence property taxation decisions in their favour and are unwilling to pay high taxes. The middle-class income housing is substantially low in these countries and does not form an adequate tax base. Local property taxation is prone to political resistance through collusion between the tax payers and the collectors resulting to rent seeking outcomes (Ahmad *et al*. 2014). This mainly occurs in the management of the cadastre where properties are deliberately left out of the tax register resulting to administrative exemption from taxation in valuation of properties some may be undervalued due to political interference.

Kelly (1999) further notes that Kenya is underutilising its property tax potential compared to other countries in the world. Under taxation of properties in these countries is a major cause of inequity (Brautigam *et al*. 2008). Kelly (1999) notes that land rates, as a source of local government revenue in Kenya have not been productive. This has mainly been because land rates have declined in relative contribution to total recurrent revenue for local

authorities and accounts for an average of 22% of the revenue. Land rates have also remained stagnant in inflation adjusted real terms and have declined as percentage of total government tax revenue at 1.3% and 0.3% of gross domestic product. At the national level, property taxation as percentage of total national revenue forms an insignificant contribution and has also been on a decline. In 2012/2013 it contributed about 0.0856% of the national tax revenue which declined to 0.0077% in 2015/2016 (KNBS, 2017). Therefore, property taxation in Kenya have been largely ignored as a source of revenue both at the local and national government levels.

1.3. Problem Statement

Past researches on local property taxation in Kenya have focused on the administration processes in taxation and have highlighted their inadequacies (Kelly 1999, 2003; Olima, 2005). The studies have also dealt with the issue of increasing revenue collection by improvement in the property tax administration processes. There has not been any research done to evaluate equity in property taxation in Kenya.

The property tax base is important in tax administration. The composition of the tax base is stipulated under the tax laws. The base can either be on the bare site value, capital value or on the rental value. The property tax base determines how much of the property tax wealth is taxable (Rosengard, 2012). Reforms on property tax should aim at widening the tax base and taxing as much of the property value as possible (Rosengard, 2012).

In 2012, Kenya adopted a devolved system of government whose aim was to transfer more power and resources to devolved county governments including Nairobi City. Property tax is one of the taxes that are assigned to the county governments under the constitution. It is a constitutional requirement for Nairobi City government to provide urban infrastucture services such as roads, schools, hospitals.

However, the City is facing financial challenges and is unable to genetrate adequate revenue. The city has high amounts of debt which has been increasing from Kshs.63.5 billion in 2013, Kshs.100.2 billion in 2014, and 147.3 billion in 2015 and up to 208.9 billion by 30th June 2016. In the financial year 2015/2016, land rates accounted for 99.3 % of all the debt owed to Nairobi (Nairobi City County, 2016).

Nairobi has continued to rely heavily on transfers from National government and neglected to exploit own revenue sources such as property taxation. Table 1-1 below indicates that revenue allocation from the national government otherwise known as equitable share has been on an upward trajectory from 2013/2014 at Kshs. 9.5 billion to Kshs. 15.4 billion in 2017/2018 which was 5.29 billion above the own source revenue and was 152.32% of the own source revenue in 2017/18. In contrast, revenue from property taxation has continued to decline as a percentage of own source revenue from 26.55% in the financial year 2015/16 to 18.50% in 2017/18.

Table 1-1: Revenue contribution from land rates, own revenue and Equitable share (national allocation), 2013 to 2018

Financial year	Property tax (Kshs.)	local revenue (Ksh.)	Equitable share (Kshs.)	% property tax to local revenue	% of equitable share to local revenue
2013/14	2582000000	9327000000	9500000000	27.68	101.85
2014/15	2593000000	11582000000	11370000000	22.38	98.61
2015/16	3110000000	11710000000	13000000000	26.55	111.06
2016/17	2253000000	10930000000	14030000000	20.61	128.36
2017/18	1871000000	10110000000	15400000000	18.50	152.32

Compiled from: Nairobi City County (2018); Republic of Kenya (2018, 2017, 2016, 2015, 2014)

The property tax base in Nairobi City and in Kenya is currently on the unimproved land. The tax system relies on unimproved site value and flat area rating. This is despite increased property development in the country and in Nairobi. Kenya has experienced growth in the construction industry. The KNBS (2017) indicates that the building and construction sector registered a growth of 13.9% in 2015 and 9.2% in 2016. The value of loans and advances to this sector also grew from 32.6% in 2010 to 50.8% in 2011, an increase of 55.8%. Nairobi being the Capital City of Kenya is where most of this growth is experienced. The value of approved buildings plans in Nairobi rose from 215.2 billion in 2015 to Ksh.304

billion in 2016, an increase of about 43% while the value of reported completed new buildings increased by 7.6% in 2016 to stand at Kshs. 72.2 billion (KNBS, 2017).

The City of Nairobi has experienced unprecedented growth in property development. Knight Frank Africa (2017) reports that 300,000 square metres of commercial office space was delivered to the market in Nairobi in 2016 against an average of about 150,000 square metres in the past years while 100,000 square metres of formal retail space was delivered against about 50,000 square metres in the past years. Some of the notable retail developments opened in 2017 includes the Two Rivers Mall along Limuru road and the Hub in Karen. Nairobi has continued to attract major investors in the real estate sector. The reasons for increase in real estate investment include improved infrastructure services, enabling political and economic environment.

Nairobi has experienced rapid urbanisation due to increased population and increase in physical extent. The population of Nairobi was 2,025,724 in 1999 and grew by about 55% in ten years to 3,138,369 in 2009 and is projected to reach 5.05 million by 2022 (ROK, 2002; KNBS, 2017 and ROK, 2008). This has put a strain on the infrastructure services in the city including roads, housing and water and sewerage services. Adequate provision of infrastructure is an indicator of efficiently managed cities. (Asoka *et al*. 2013). Inadequate provision of urban infrastructure has resulted in increased levels of poverty which had risen from 26% in 1992 to 50% in 1997 (Un-Habitat, 2006).

Increased urbanisation and property development have led to increased demand for urban services. The increased population growth has resulted to increased demand for urban services especially serviced land, housing, expansion of the existing road network, sewerage system, schools, and hospitals. These are capital-intensive projects and therefore the City has the onus to raise adequate revenue to meet the growing needs.

Urban service provision in Nairobi has not grown in tandem with the economic, physical, and social growth of Nairobi. The revenue generated by the local government has been inadequate to meet the growing demand for urban services. The financial capability of Nairobi is limited due to poor resource management and weak revenue collection system (UN Habitat, 2006).

Callan (1991) notes that property taxation is a proxy for wealth and housing wealth constitutes a large percentage of most household wealth in terms of owner-occupied residential houses. In Kenya, owner occupied houses are exempt from income taxation.

With the growth in property development experienced in Nairobi, there is an increase in development of storied buildings including apartments and office building. Property owners can now own a sub-lease in an apartment without necessarily owning the land. Due to this development, the Government enacted The Sectional Property Act, 1987 of the Laws of Kenya to regulate the ownership of such properties. One can own a sectional property such as an apartment or land in a sub-division scheme with shared ownership of the common facilities. With the current practice of land value taxation, these property owners are left out of local property taxation, which has implications on equity in property taxation.

This implies that a lot of wealth is not captured for local property taxation purposes, which affects the property tax base. As discussed above, property taxation is tax on wealthy. With the current practice in Kenya of taxing the unimproved land only, it means that wealth in the form of improvements on the land is exempted from taxation. Exemption of property from taxation leads to regressive taxation and adverse effects under the equity principles (Bahl and Martinez, 2007).

Lewis, (1984) gives exemptions as one of the causes of lack of equity in property taxation. Exemptions narrow the tax base, which affects revenue generation and equity. Kelly, (2000) notes that Local Authorities in Kenya excludes most of the land within their areas of jurisdiction from taxation with the coverage ratio ranging between 30 to 70 per cent of the total taxable land. He adds that the excluded land includes land under freehold ownership, agricultural land that is less than 12 acres and unregistered public land, though this land should be charged contribution in lieu of rates. Also excluded is allocated local authority land that has not yet been registered.

These exclusions amount to tax exemptions, which is unfair to the tax paying property owners. Therefore, the poor administration of the tax system compromises equity in property taxation which affects the revenue adequacy of the local government (UN Habitat, 2006).

Property taxation in Kenya faces challenges of administration (Kelly, 2000). Nairobi City has not carried a revaluation exercise for its land value taxation process since 1982, about 36 years ago. The land values are out dated and do not reflect the current market situation.

With valuation registers that are historical and not updated, it means that there are properties that have not been captured in the valuation rolls. Lack of regular re-valuations results to assessed values that are unrelated to the actual market values. This hinders equity in property taxation (Callan, 1991). All these issues not only lead to low revenue collection, but also to inequity in taxation (Olima, 2005). The exemption of improvements from taxation also denies the local government a chance to tax the capital investments owned by foreigners who own property in Kenya. This further affects equity.

Under taxation of property in Kenya and other developing countries is a major cause for inequity in taxation (Brautigam *et al*. 2008). In Nairobi most of the properties which should be included in the tax register are omitted. This is mainly because many properties are left out in the taxation processes that are a way of legitimised exemptions.

An official at Nairobi City notes that of the 135,000 rateable properties in Nairobi City, only about 55% pay rates regularly and that less than a half of the properties in Nairobi are captured in the City's database (Business Daily, 2014). This implies that majority of properties enjoying the public investments that contribute to increased value are not contributing to the provision and maintenance of these services.

Increase in urban property values are mainly because of public investments in infrastructure and service provision (Walters, 2012; Huxley, 2009). The aim of land and property taxation is to capture some of this increase in private property values to finance public infrastructure and service provision. Walters (2012) notes that the burden on local services does not emanate from vacant land but from the improvements made on the land.

Demand for public services is created by the activities that are carried out on developed land not on vacant land. The improvements on the land should be taxed because they are the source of demand for water provision, garbage collection, fire-fighting services, and wastewater disposal services. Therefore, the tax on bare land only exclude properties that are benefitting from service provision from contributing to the services they enjoy.

Equity in property taxation increases the taxpayers' confidence in the tax system (Plimmer *et al*. 2000). This promotes tax payment compliance and results to high revenue collection. Taxpayers' perceptions on whether the property tax system is fair in implementation affect its effectiveness in raising revenue because taxpayers are more likely to comply in paying taxes where they perceive the system is fair (Slack and Bird, 2014).

Taxpayers' perception on the fairness of the property tax system is therefore an important element for the tax system to achieve its main objective of revenue generation. In Nairobi, tax rates were increased from 17% to 34% of the unimproved site value in 2014. There was a feeling by city residents that the increase was high and only targeted those properties that were in the tax database. This resulted in lawsuits against the Nairobi City seeking to stop the increases (Business Daily, 2014).

Tanzi and Zee (2000) gives three objectives for any policy of taxation in developing countries. These are - should be to raise adequate revenue, to raise the revenue in an equitable way and in doing so, not to deviate from internationally accepted standards.

For a country to attain economic development, there is need to ensure equity in development which can be achieved with adequate revenue generation and addressing the problems of inequity. Equity in property taxation can therefore be used to promote a fair and just society. If well implemented property taxation can be progressive in developing countries because property ownership is concentrated among the wealthy (Bahl and Martinez, 2007).

Past researches on local property taxation in Kenya have been general and wide in scope covering property tax administration in local authorities in the country, highlighting their inadequacies and were mainly done before devolution of the national government to form county governments (Kelly 1999 and 2003; Konyimbih, 2000; Olima, 2005). The studies have also dealt with the issue of increasing revenue collection by improvement in the property tax administration processes.

McCluskey *et al.* (2017) examines property taxation in Kenya, giving a background of all land related taxes. They examine property tax administration processes of tax base, assessment, exemptions, tax rate, billing, collection and enforcement in Kenya. They have

highlighted the challenges of property taxation in Kenya which include legal vacuum under the current system of devolution, incomplete survey and title registration processes, inadequate capacity, ineffective and poorly applied enforcement mechanism, lack of political will and lack of willingness to pay the tax. There has not been any empirical research done to evaluate equity in property taxation in Nairobi City.

Table 1-2 below indicates that though there has been research in property taxation in Kenya, none has exhaustively addressed the issue of equity. Studies on equity in property taxation have been carried out in the USA. However, Kenya and USA have different systems of property taxation. In Kenya, the tax is on the unimproved site value while in the USA the tax base is on the capital value of both the land and buildings.

The revenue inadequacy of Nairobi City necessitated this research. Kenya adopted a new constitution in 2010 which provided for devolved structure of governance with two tiers of government, national and county government. The process involved the transfer of functions, powers and resources to the local governments which assume full responsibility and accountability (Mboga, 2009). Nairobi is one of the 47 counties that came about after the county governments' election in 2013.

Table 1-2: Past studies in property taxation

Author and year	Title	Country of study	Issues in the study
Kelly (2000)	Property taxation in East Africa- the tale of three reforms	Kenya, Uganda, and Tanzania	Examines the administration of property taxation systems in the three East African Countries.
Kelly (2000)	Designing a property tax reform strategy for sub-Saharan Africa: An analytical framework applied to Kenya	Kenya	Examines ways of improving revenue collection under property taxation in Kenya. He proposes that reforming four ratios can do this: - coverage, valuation, tax ratio and collection ratio
McCluskey *et al.* (2017)	Property taxation in Kenya	Kenya	Gives a background of all land related taxes
McClucksey *et al.* (2005)	Theoretical Basis of Land Value taxation	Kenya	Examines the theory of land or site value taxation
Konyimbih (2000)	Land Value taxation: Rating Principles and Guidelines in Kenya	Kenya	Broadly examines the practice of land value taxation in Kenya
Kayuza (2006) PhD thesis	Real Property Taxation- An investigation on implementation and taxpayers' perception	Tanzania	Examines property taxation in Tanzania. Mentions equity in property taxation but not in details. Property taxation is on the improvements on the land and excludes the value of the land.
Cornia and Slade (2005)	Property taxation of multi-family housing: An empirical analysis of vertical and horizontal equity.	Maricopa County, Arizona, United States of America	Property taxation in USA is under capital value system where tax is on both land and structure. This is different from Kenya which currently has tax on the unimproved land excluding the structures
Peden (2012)	The Property Tax Crisis, Equity, And Property Tax Reform: Choosing Between Market & Non-Market Methods of Valuing the Property Tax Base	United States of America	Similar comments as above. Examines how valuation methods affects property tax equity

Source: Author's construct (2018)

The main aim of this research therefore is to evaluate whether property taxation in Nairobi City is related to the value of the property which is a proxy of the ability to pay. The research also evaluates the impact of property tax administration processes of property tax base coverage and property valuation on equity in the local property taxation in Nairobi.

1.4. Research objectives

The main objective is to evaluate the extent of equity in Local Government property taxation in Nairobi City. The sub- objectives used to achieve the main objective of the research; -

i. To evaluate the property tax base and coverage in Nairobi City.
ii. To assess and measure the level of equity in property taxation in Nairobi city
iii. To evaluate the policy implications of equity on local property taxation in Nairobi City.

1.5. Research questions

The research questions for the three research objectives are as follows; -

Objective one- To evaluate the property tax base and coverage in Nairobi City

i. What are the different tax bases in property taxation?
ii. Is the tax base coverage complete and all-inclusive?

Objective two- To assess and measure the level of equity in property taxation

i. Is there equity in property taxation based on the value of the property?
ii. Is there equity in property taxation based on location of the property?
iii. Is there equity in property taxation based on the tax base?

Objective three: - To evaluate the implications of equity on local property taxation in Nairobi City

i. What is the impact of equity on local property tax revenue adequacy in Nairobi City?
ii. What measures can be adapted to enhance equity in local property taxation?

1.6. Research Assumptions

The research assumes that there is no equity in property tax taxation in Nairobi City based on the tax base coverage and value of the property.

1.7. Significance of the research

Property taxation at the local government level has attracted a lot of attention in the less developing countries as emphasis is put on fiscal decentralisation. Kenya adopted devolved form of government after elections in 2013 which resulted into two levels of governments, National and 47 county governments. The County governments are supposed to be financially sustainable but they have continually relied heavily on National government transfers instead of exploiting own source revenues.

Equity in property taxation is one of the factors affecting the capacity of the County governments to raise adequate revenue from property taxation. Most of the urban areas in Kenya rely on out-dated valuation rolls where values used for property taxation are not related to market value. They also rely on flat area rating system where the value of land is not taken into consideration. The findings of this study are therefore important to policy makers and County governments in enhancing equity in property taxation to ensure revenue adequacy of the County governments.

Kenya has been carrying out reforms to improve service delivery in the urban areas. In 2011, the urban areas and Cities Act No. 13 of 2011 was enacted. It sets the guidelines for establishing urban areas in the Country and provides for how they should be classified, governed, and managed. One of the criteria for an area to qualify for classification as a City, to be conferred municipal status or to be town status, is that it should have the capacity to generate adequate revenue. Property taxation is one of the major sources of local government revenue which if well exploited can generate adequate revenue for the urban areas in Kenya. The challenge of equity in property taxation however undermines this potential.

The Constitution of Kenya requires that the equity principle be adhered to in all forms of taxation in the country. For local government property taxation, the existing legislation does not specify the parameters that should be followed to ensure equity in taxation. This

research therefore highlights the inadequacies in the existing legislation on local government taxation in enhancing equity in property taxation. The recommendations of the research are important for policy makers to implement laws that ensure equity in property taxation.

Kenya has been carrying out land reforms in line with Vision 2030 where land reforms are one of the foundations for social economic transformation of the Country. The findings of the research are therefore useful to policy makers as equity in property taxation can be made a key component of the reforms. The research act as a guide to the on-going land reforms on the issue of ensuring equity in property taxation in Kenya. The findings are also important to the National Land Commission whose mandate includes carrying out research on matters pertaining to land and advising the government on property taxation.

This research is important because there has not been previous research on evaluation of equity in local property taxation in Kenya. The research can be useful to researchers in carrying out further research in equity in property taxation in other County governments in Kenya.

The findings of the research add to the body of knowledge on property taxation in Kenya and enhances the debate on whether taxing land only can adequately raise revenue for the County government and make them financially independent of the National Government. This is one of the aims of devolution.

The research highlights the role of equity property taxation in urban development its implication on revenue adequacy of the County governments to ensure well managed Cities and urban areas.

1.8. Scope of the study

This research is limited to equity in property taxation in Nairobi City. The research findings may however apply to other County governments of Kenya.

The review of literature is limited to local government property taxation in the world. The research methods, data collection, analysis, policy implications and conclusions focus on

NCC but the policy implications and conclusions can apply to the other County governments in Kenya.

The study mainly focuses on elements of property tax administration that impacts on equity namely property tax base and its coverage and how the tax base is assessed. The study does not cover equity based on property tax collection and enforcements. On the theoretical basis of the study, it adopts the ability to pay theory of taxation, where the property's market value is a proxy of the ability to pay.

This is a cross sectional study whose time frame of data include desk research and field survey done between 2016 and 2017. Equity in property taxation is assessed using market value of vacant sites as at 2016 and the unimproved site values used by the Nairobi City. Data on land rates payable to NCC in 2017 is used. Data analysis is done using parameters recommended by IAAO.

1.9. Definition of terms

Effective tax rate- the annual tax in Kenya Shillings charged on a property, divided by the estimated market value of the land element of the property for that year.

Equity- fairness in the property tax system

Horizontal equity – means equal treatment of equals. In property taxation this means equal taxation of properties with the same market value and in the same neighbourhood. Property taxation should be related to its market value, which is an indicator of ability to pay.

Vertical equity- used to assess the relationship between property taxes in high-income neighbourhoods with better services and those in low-income neighbourhoods with comparatively lower services. It is also used to assess property taxation of properties in different value ranges. In this research, it will be used to evaluate equity in property taxation for properties in different study areas.

Land capitalization - Capitalization of the public infrastructural services available in a neighbourhood into the land values.

Local taxes- taxes imposed and paid at the local government level

Property taxation - imposition of annual recurrent tax on land, or on the improvements thereon at the local government level.

Property tax base – the base on which the property tax is assessed. Depending on what the country has adapted, this can be on the capital value, unimproved land/site value, annual rental value, or area rating.

Property valuation- assessment of the market value of the real property and includes the land and/ or improvements thereof.

1.10. Organisation of the study

The following is a brief outline of the study.

Chapter one: Background and context to the study. This chapter discusses the overview of local government property taxation. It introduces the research problem, the objectives and significance of the research.

Chapter Two: Equity in property taxation: Theoretical and conceptual framework. The chapter is on literature review and discusses the theoretical framework of equity in property taxation and concepts of local government property taxation that impacts on equity. The chapter also discusses the property tax base, coverage, and valuation and how they affect equity in local government taxation.

Chapter Three: Research design and methodology- the chapter presents the methodology used in conducting the research. The research designs, data collection methods, variables in the study and data analysis procedures are discussed.

Chapter four: The property tax base and coverage in Nairobi City- The chapter presents the research findings of the property tax base and coverage in Nairobi. The purpose is to report on the findings of objective 1 which is too evaluate the extent of equity based on property tax base and coverage.

Chapter five: An assessment of equity in property taxation in Nairobi City*:* The chapter presents the finding of the research on objective 2 which is to evaluate the extent of equity based on the market value of the property.

Chapter six: Policy implications of the research. The chapter discusses the findings in Chapter 4 and 5 and their policy implications on property taxation in *Nairobi City*.

Chapter seven: Conclusions and recommendation- the discussions in chapter 8 lead to the conclusions and recommendations for this research.

CHAPTER 2 : EQUITY IN PROPERTY TAXATION; THEORETICAL AND CONCEPTUAL FRAMEWORK

2.1. Property taxation

Taxes are compulsory payments associated with certain activities (Hyman, 2011). Governments levy taxes on wealth, income and production and consumption of goods and services. Taxes are classified as either direct or indirect tax depending on the administration procedure. (Hardwick *et al*. 1999). Direct taxes bring the taxpayer into direct contact with the tax collector, which does not occur under the indirect taxes. Indirect taxes include income tax which is remitted directly to the government. Property taxes are a form of direct tax on wealth, which is accumulated stock held at a certain place and time (Hyman, 2011).

Property taxes at the local government level are one of the local taxes mainly legally assigned to them. Bird (2010) defines a sub-national or local tax as a tax which the local government has the mandate to levy or not, determines the tax base and the tax rate, administers the tax in terms of assessment, collection and enforcement and retains all the revenue collected from the tax. Most property taxes in the world do not meet all these criteria but may meet only some (Bird, 2010 and Enid, 2014). This research covers recurrent local property taxes that include ad valorem taxes that are based on the assessed rental, capital value or land value. The taxes can also be area based and are discussed under the different systems of property taxation.

Property taxes vary between countries depending on the base of taxation (Bahl and Linn, 1992). There are four types of property tax bases; annual or rental value, capital value of land and the improvements (discussed below under the tax base on property design) and site value of unimproved land and area-based taxes as discussed below under land value taxation.

2.2.1. Objectives of property taxation

Tresch (2015) and Lawton and Reed (2013) give the objectives of taxation as revenue collection, stabilization or economic efficiency and the redistribution or social justice role. The main objective of property taxation is collecting revenue for the state to fund its expenditure.

According to Hyman (2011) taxes reallocate resources from the private sector to the government. They reduce an individual's income for spending on goods and services. Through taxation, allocation of resources is done from the private sector to the public sector to facilitate the government in provision of public goods and services. The government uses direct taxes on income and property, and indirect taxes such as value added tax, custom duty tax and excise duty tax. In Kenya, there are property taxes by the national government and the local government. The practice of the local governments currently is to tax only the unimproved site value of land.

Taxation is one of the sources of revenue for both national and local governments. The revenue generated from taxation by the county government is used for provision of services under the functions that have been delegated to them by the national government.

The government also uses taxation to stabilize the economy. To control inflation caused by high prices of goods, the government may reduce the rate of indirect taxes, which in turn will reduce the prices resulting to decrease in inflation. Inflation leads to increase in demand for goods and services. Increase in the rate of taxation results in reduction in consumption, leading to reduced demand and inflation. The argument for property taxes is that they have minimal distortion of the economy compared to taxes on income and profits (Lawton and Reed, 2013). Economists argue that taxes on property can promote growth if they are accompanied by a reduction in taxes on income and profits.

Under-taxation of property results to increased investment in the property sector and increased demand, leading to increase in property prices which benefit the current property owners but locks out prospective property owners (Lawton and Reed, 2013). Under taxation also encourages speculative buying and hoarding of land and promotes investment in the property market at the expense of the other sectors of the economy such as industry and business.

Through the redistribution role, the government uses taxes to reduce the purchasing power of individuals and corporations. Taxes are used to achieve fair distribution of resources in a society and to reduce income inequality. When carrying out the distribution function, the government promotes equity or fair distribution of income and wealth (Hardwick *et al*.

1999). This can be achieved by imposing higher rates of taxation on higher incomes. This can also be achieved by ensuring a fair distribution of the tax burden in the community. This is mainly done by using progressive taxation on direct taxes such as income and property taxes. In case of progressive property taxation, the value of the property is an indication of wealth of the owner and acts as a proxy for income. Therefore, high-end properties are taxed at higher rates than the lower end properties.

Property Taxes are also used to encourage some certain forms of land use. The government has used tax exemptions on export processing zones to encourage development of industries and overall industrial development. Property taxation can therefore be used to encourage some form of land use and to discourage others.

2.2.2. Property taxation as a source of local government revenue

Bahl and Martinez-Vazquez (2007) and Cornia and Slade (2005) address the use of property taxation as a source of local government revenue by looking at the advantages and disadvantages of local property taxation.

The advantages include; -

a. Revenue potential and stability.

Property tax is a major source of local government revenue. In Canada and U.S., it accounts for 3% and 4% of the GDP respectively. In most developing countries, the tax base is on capital value that includes land and buildings. This tax base is stable and is ever growing due to increased property values and development. Most developing countries have however not fully utilized the property tax as source of local government revenue.

Compared to other form of taxation such as income tax and sales tax, the property tax is relatively stable. The tax base, which is the property, is immobile unlike income that can move to other jurisdictions, even internationally.

Cornia and Slade (2005) also note that the property tax enhances the objective of decentralisation by promoting fiscal and political autonomy for decentralised local governments. When local governments are financially autonomous from the central government, they can make independent decision that can promote accountability in their

administration. For countries to benefit from the revenue potential of the property tax, the assessed property value must be a true reflection of the market values.

b. Immobile tax base.

Land which is the property tax base is immobile. This is unlike income tax and sales tax where increase in tax in one jurisdiction or country may result to taxpayers and business relocating to areas with lower tax rates. This is especially important in this age of globalisation. '-- tax competition, aggressive tax planning, and the use of tax havens to shelter income have corroded tax bases and invited introduction of a plethora of often costly policy and administrative measures to safeguard national tax bases and powers' Norregaard (2013, p. 4). According to Grover *et al*. (2016) the tax is highly visible and cannot be hidden and enables the local authority to tax it.

c. Fairness and equity

This is discussed above under the Equity principle of property taxation in 2.3.

d. Does not lead to tax exporting

The property tax is mainly borne by the residents who benefit from the public service provisions in the taxing jurisdiction. The taxing authority is not able to export the tax burden in the form of cost of service provision to other jurisdictions. This aspect is likely to promote good governance of the local government because the residents can demand better services for the property taxes they pay.

Bahl and Martinez-Vazquez, 2007 however note that this argument can be challenged especially where the land is owned by absentee property owners who are able to pass the tax burden to their tenants.

e. Compliance cost

The compliance cost of property tax to the property owner who is the taxpayer is minimal. The assessment of the tax is often the responsibility of the taxing authority, which bears the bulk of the cost. This is unlike other self-assessed taxes such as the income tax and the value added taxes.

The disadvantages of property tax as a source of local government revenue include; -

a. High administration cost

The property tax has high administration costs resulting in low assessment and collection ratios in the developing countries. This affects fairness in treatment of taxpayers. The costs are mainly associated with high cost of appeal processes; requirement for detailed information in the administration process and shortage of assessors in most developing countries. The high administration cost affects the administration efficiency resulting to low revenue yield.

b. Difficulty in enforcement

This is due to tax payers' attitude and the fact that the tax base is inelastic. The property tax is unpopular with voters making it prone to influence by politicians seeking political mileage. The main reasons for its unpopularity include the following: -

- It is a tax on wealth, which does not always correspond with income received. This is unlike other forms of wealth taxes such as stocks and capital gain which are levied by the national government and only get taxed after the realization mainly through disposal. However, property is subject to taxation irrespective of whether it is yielding any income or not.
- The property tax is highly visible because it is paid as a lump sum usually once a year. This is unlike other taxes paid in small amounts over a period.
- The property assessment or valuation methods are subjective and not easily understood by the public. There are usually long appeal processes that are expensive and affect tax enforcement.
- The tax is a direct tax whereas the public benefits received from paying are usually indirect.
- It is not easy to evade the tax unlike other taxes such as the income tax.

The property tax is not income elastic as compared to income tax. For there to be increase in the tax, revaluations are required, which are often expensive.

"When revaluation is too infrequent, say every 5 or 10 years, it leads to large one-time increases in tax liability and to voter uproar from the shock. As a result, countries use various means to cushion the shock, but these many times end up reducing the effective rate of property tax" (Bahl and Martinez-Vazquez, 2007, p. 7).

2.2.3. Principles of taxation

In his book, *Wealth of Nations,* 1776, Adam smith came up with the principles of taxation that have been widely used by economists when designing tax systems. The principles are used to evaluate the effectiveness of a tax system. Brunori *et al*. (2006) and Ulbrich (2011) gives the principles of taxation are revenue adequacy; stability; efficiency; certainty and equity.

2.2.3.1.Revenue adequacy principle

The tax should be able to generate enough revenue to meet the expenditures as per the budget. For property tax, the defined tax base will affect the amount of revenue generated. This is discussed below under site value taxation, annual rental value taxation, capital value taxation and area-based taxes. Site value tax has a limited revenue base because tax is only levied on the land element of the property. The annual rental value and capital value system both include land and the improvements as the tax base.

The administration of the property tax system including tax base, valuation, collection, and enforcement affects its adequacy. Poor administration of the property tax systems results in low revenue collection.

Unlike income tax that increases with increase in income, property tax is not buoyant. A revaluation of the property base is required before any increase in the values can be affected. Property revaluation is done under high professional fees and is also time consuming. This makes its administration difficult and costly.

Revenue generated from taxation should have stability. The revenue flow should not be subject to fluctuations in the economy such as inflation. Brunori *et al*. 2006 note that property tax provides a reliable and stable source of revenue to the local government. The

tax base is immobile unlike income tax where taxpayers can move and even relocate countries to evade taxes.

Due to the stability of property tax the revenue generated can easily be predicted and therefore, local governments can budget in advance on the potential revenue which makes it reliable. With frequent revaluations, the tax can be buoyant because property values increase with time. Therefore, when well administered, property taxation can be a stable source of local government revenue.

2.2.3.2.Efficiency principle of taxation

This relates to collection cost by the government and compliance cost by the taxpayer. For land value tax, the collection cost can be low since the tax base is the unimproved value of the land and valuation will therefore not include improvements. However, there is need for frequent valuations that can increase collection costs especially for property taxation that includes improvements. It also involves handling of disputes and appeals and the assessed values. The property can act as collateral that can be sold by the taxing authority in case of failure to pay taxes.

2.2.3.3.The certainty principle

This provides that the taxpayer should be certain of how much he is to pay and when and how to pay it. The tax should be certain and not arbitrary in terms of the amount to be paid and the rate to be charged. In property value taxation a taxpayer is usually certain of the tax to pay because assessment is usually done after duration of time e.g. every 3 or 5 years. The taxpayer should have certainty of the amount they are to pay, when and how. Land value tax is usually an annual tax where the taxpayer knows the assessed value and the rate at which to pay tax. This makes tax compliance easy.

2.2.3.4.The equity principle

The equity principle is discussed under 2.3 below.

2.3. Equity in property taxation

Equity is defined as the "quality of being fair and impartial" (Oxford Dictionary). In property taxation, equity is concerned with the fair distribution of the tax burden among the citizens and it is concerned with justice (Young, 1995 and Ulbrich, 2011). According to Young, (1995) the distribution or allocation of the burden of taxation is through a political process rather than the market.

He notes that the allocation of tax burden involves decisions on the amount of the burden to be distributed- how much to be taxed; the formula or principle by which the tax is to be distributed to the eligible persons; a reactive decision where the individuals affected respond to the institutions which have made the decisions. These decisions then result to an effective allocation of the tax burden.

Equity therefore, should be based on legislation as established in a country depending on the objectives the country would want to achieve in distribution of the tax burden. Ulbrich, (2011) notes that equity in tax design and reform is very important because any change in the tax base, rate or rules changes the distribution of the tax burden.

The equity principle of taxation has its origin from the canons of taxation of Adams Smith (1723-1790). In his book, the Wealth of Nations when writing about taxes as a source of revenue for the State, Smith says,

"The subjects of every state ought to contribute towards the support of the government, as nearly as possible in proportion to their respective abilities." This is advocating for proportionate taxation based on ability to pay.

Tresch, (2015) gives two types of equity in economics. The first one is process equity, based on judgement on whether the economic rules of the game are fair. It deals with equal opportunity of access and discourages discrimination on this basis. It also deals with social mobility and facilitation of distribution of income and wealth. This is the basis of ensuring equal rights in the society, rights to education, employment, without discrimination.

The second one is the end-result equity that is concerned with just distribution of income. Though the criterion for arriving at horizontal equity is clearly equal treatment of equals, there is no agreement among economists on the criteria for ensuring vertical equity (Tresch, 2015 and Musgrave, 1990). It falls under normative economics which in economics based on value judgement or opinions. According to vertical equity, unequal members of the society should be treated unequally. But "just how unequally should the society be treated?"

Vertical equity requires that the society establish some standards upon which the differentiation should be based but most often people disagree based on differentiation. Musgrave (1990) notes that horizontal equity is a basis for minimal rule of fairness in property taxation whereas; vertical equity is based on social taste and political preference.

Though economists agree that the burden of taxation ought to be distributed in a fair manner, they do not agree what constitutes fairness (Hardwick *et al*. 1999). Equity therefore falls under normative or value-based economics, which is subjective.

Equity is grounded in the ethical concept of justice which includes distributional justice, retributive justice, and restorative justice (Ulbrich, 2011). The last two are beyond the scope of this research.

2.3.1. Theory of distributive justice

Distributive justice is concerned with the distribution of burdens or taxes and benefits (Malese, 2013). Distributive justice varies depending to what is being distributed, whether income, wealth, or opportunities; the nature of recipients whether individual, groups and based on the distribution (Lamont, 1996).

It falls under welfare economics which is concerned with the distribution of scarce resources in the society. In a given economy, the resources are scarce and this calls for distribution to be done in a fair way to ensure everyone gets their fair share. Malese (2013) gives three principles of distribution, namely according the equity, equality, and need.

Under the equality principle, goods are distributed equally among all individuals where every person gets equal amount irrespective of their need. This principle is criticised in that the needs of individuals are different and therefore the outcomes will be different. In distribution according to need, those who are in more need of a benefit are given more.

According to Young (1995), equity has its origin in three schools of thought; - Aristotle principle, Utilitarianism principle and John Rawls theory of justice.

a. Aristotle principle

According to this principle, goods are divided according to each claimant's contribution. Young, (1995) argues that this theory has a limitation because there should be some ways of measuring contribution of each claimant on an ordinal scale; for there to be proportionality, the goods must be divisible.

b. Utilitarianism principle

This principle was prevalent in the 18th century and requires that goods and tax burdens be distributed in a way that maximizes the total welfare of the claimants (Young, 1995). However, according to Young (1995) this principle has limitations. It does not provide a method of measuring the level of satisfaction among individuals. He also argues that ensuring utility to many might mean imposing harm to a few.

c. John Rawls theory of justice

In his book, *Theory of Justice, 1971* John Rawls sets out rules for just distribution of resources in a society including income and wealth (Ulbrich, 2011). He argues that if a person were given an opportunity to distribute resources without prior knowledge of where one would fall in the system they have designed; one would advocate for a fair system of distribution. He calls this decision framework as the "veil of ignorance" (Ulbrich, 2011).

This would result in a system with rules and practices that protect the less advantaged members of the society. In his maximin of difference principle, he states that "the least well-off group in a society should be made as well off as possible."

According to the theory, the measurement for wellness or satisfaction is what John Rawls calls primary goods, which includes income, opportunity, power, and self-respect (Young, 1995). He notes that distribution of income should be in such a way that the person with the least income has as much income as possible.

Young (1995) notes that, Rawls theory has advantages over the above two theories because it is based on observable characteristics of individuals such as income and wealth rather than on interpersonal comparison of welfare. It also avoids the ethical problem of benefitting the many at the expense of a few. Criticism of this theory is on the fact that it advocates for raising the welfare of the least disadvantaged in the society at the expense of the advantaged.

There is therefore no agreed criterion by economists on equity. However, it is agreed that there should be equity in property taxation. Ulbrich, 2011 notes that market-based systems often fail in distribution of income and wealth. They often result to unequal society.

Therefore, governments and societies need to agree on some measure of equity to address these market failures.

A society can reflect its desired distribution of income through a political process. This sets the norms and the standards that the society desires to achieve (Hardwick *et al*. 1999). In Kenya, Chapter 12 of the Constitution, 2010 requires the public finance system promotes an equitable system and ensures that the burden of taxation is shared fairly.

According to Lewis (1984), Ulbrich (2011) and Hyman (2011) the burden of government finance is distributed under two principles or theories which are also a justification of taxation of property as wealth. These principles are the benefit received theory and the ability to pay theory.

2.3.2. Theories of equity in property taxation

2.3.2.1.The Benefit received theory

This principle originated in the 14th and 15th centuries under feudalism, where the feudal lords would pay a tax to the crown for protection against the enemies (Tresch, 2015). The rationale is that the means of financing government good and services should be linked to the benefit received by the citizens.

This links the costs of government's goods and services to the beneficiaries of the services. Lewis (1984) argues that many public services such as security are of more benefit to those who have things to protect. Those with more wealth receive greater benefits from public services and therefore taxation is in line with the benefit-received principle.

Further on property taxation being a benefit tax, Ulbrich, (2011) notes that most local services such as police protection, fire protection, roads, streetlights, and garbage collection are directly linked to the property. Therefore, it can be argued that the availability of these services affects the value of the property being served or protected. Urban public investments usually result in enhanced property values in the serviced areas (Bahl and Martinex-Vazquez, 2007). The tax can therefore be deemed a benefit tax for the services provided.

Henry George advocated for land taxation as a way of taxing those who receive benefits from the state. In Progress and Poverty, he says,

"--- a tax on land values is the most equal of all taxes. It falls on those who receive a unique and valuable benefit from the society. It is taking by the community, for the use of the community, from the value that is the creation of the community. It is the application of the common property to the common use."

Adam Smith (1776) also advocated for citizens of the state to pay tax "in proportion with the revenue enjoyed under the protection of the state."

The benefit received principle in taxation can be used to finance public goods and services where it is feasible to directly identify and measure the specific private benefit that the good or service confers to an individual (Duff, 2008).

According to Duff (2018), the benefit received principle has been criticised on the grounds that it assumes a just distribution of economic resources which can only be achieved by collection of other taxes. Where the good provided is essential for promotion of human welfare such as education and health care, application of the benefit received approach may result to denial of the service. It is also impossible to apply the principle to purely public goods and services such as security and national defence.

Rosengard, (2012) also notes that property tax is deemed to be an equitable tax since it is related to the local government services enjoyed by a property. The property tax as a benefit tax acts as a "--way to enable the public sector to derive a share of private sector windfall gains from appreciation of real estate values largely due to public investments in previously un-serviced land."

Bahl and Martinex-Vazquez, (2007) also note that in developing countries, the property tax can be seen to be equitable. This is because property ownership is skewed in favour of the wealthy who are not usually reached by income tax. They further note that the low-income public housing is also not taxed which makes the property tax progressive.

Hardwick *et al*. (1999) however notes that the application of the benefit principle requires that taxation be directly linked to the government expenditure. Many people may benefit

from government expenditure such as social services and it is difficult to link them directly with the benefit for taxation purposes. The motorists who may be benefiting from road network in Nairobi may not necessarily reside in Nairobi or own property in the area. It would therefore be difficult to apply this principle. Tresch, (2015) further adds that the principle does not answer the question on exactly what benefits should be used. He asks whether it is total benefits, average benefits or marginal benefits and concludes that there is no agreement among economists on this.

Urban public services result in enhanced property values. The cost of public services is capitalized in the property values and therefore a property tax acts as a user fee for services received by a property (Norregaard, 2013). Individuals and firms will therefore choose to locate in areas well served with public services in the form of roads, sewerage and drainage and street lighting. The benefit view of property taxation therefore makes it an efficient tax which is fair (Norregaard, 2013).

The benefits of services in an area are capitalized in the property values. The properties in high-income neighbourhood benefit from provision of more infrastructure services and hence have high values than those in comparatively lower income neighbourhoods.

The benefit-received principle links the benefits provided by the local government to the taxes paid (Ulbrich, 2011, Hyman, 2011). Hence, property taxes act as a user fee through which the property owner who enjoys the services makes payment for the provision of local government services. The areas that receive more benefits should therefore pay more tax. This is used to justify higher property taxation of the high-income neighbourhood than the poor income neighbourhoods.

2.3.2.2.Ability to Pay theory

According to the theory of ability to pay, taxes should be levied according to the ability of the tax payer to pay them. It emanates from the canons of taxation by Adam Smith, that people should pay taxes according to their abilities (Hardwick *et al*. 1999). John Stuart Mills further expounded on the ability to pay principle in the Principles of Political Economy (Mills, 1885). He argued for equality of taxation and further posited that it means equality of sacrifice. Mill (1885, p. 622).

A government ought to make no distinction of persons or classes in the strength of their claims on it. If anyone bears less than his fair share of the burden, some other person must suffer more than his share. Equality of taxation, therefore, as a maxim of politics, means equality of sacrifice. It means apportioning the contribution of each person toward the expenses of government, so that he shall feel neither more nor less inconvenience from his share of the payment than every other person experience from his.

Citizens with the ability to earn more income should be taxed more (Hyman, 2011). It is argued that wealth is a good indicator or proxy of an individual ability to pay tax. The value of one's property will indicate how much they are worth.

2.3.3. Measures of equity in property taxation

The principle of equity in taxation advocates for equal treatment of equals. In property taxation, equity is a measure of how the tax system is administered in terms of the assessed values (Plimmer, *et al*. 2000). Equity in property taxation is determined under two measurements- horizontal equity and vertical equity.

2.3.3.1.Horizontal equity

In horizontal equity, identical properties with the same values should have the same tax. Horizontal equity exists when taxpayers who are similarly situated bear the same tax burden after shifting is taken into consideration. The term similarly situated often implies having the same income.

In a system that achieves horizontal equity; two taxpayers with the same economic conditions bear the same tax burden. Regarding property, the value of the property becomes a proxy for income and determines whether the taxpayers are similarly situated.

2.3.3.2.Vertical equity

Vertical equity is concerned with how the tax laws treat unequal unequally (Tresch, 2015). This is achieved through the design of the tax structure such as whether the tax rate is a flat rate, graduated or rising with income; and the exemptions from taxation. Under vertical equity a property with a higher value should have high tax.

Properties that have different values should have different tax burdens. In property taxation, vertical inequity exists when there are systematic differences in valuation of low and high valued properties (IAAO, 2013).

Under vertical equity, tax systems are further classified as progressive, regressive, or proportional depending on how the tax burden is distributed (Musgrave, 1985; Ulbrich, 2011 Hyman, 2011). Under progressive property tax, the percentage of tax paid increases as the value of property increases while under regressive tax the percentage of tax paid increases as the value of property decreases. Under proportional tax system, also called a flat rate tax, the property tax does not change irrespective of the value of the property; it is a certain proportion of the property value, an example is tax at 5% irrespective of the value of the property. According to Plimmer, *et al*. (2000), property taxation can either be regressive, when high valued properties are under assessed relative to low valued properties and progressive when properties with high value pay more tax in relation to low valued properties.

IAAO (2013) notes that the property tax assessment system is regressive when low-value properties are appraised or valued at greater percentage of market value than high-value properties. When low-value properties are appraised at smaller percentages of market value than high-value properties, there is assessment *progressivity*. According to IAAO (2013), appraisal of property for tax purposes should be neither regressive nor progressive

According to Cornia and Slade, (2005) vertical equity results when there is uniform assessment ratio across property value ranges. They define assessment ratio as the ratio of assessed value (AV) to market value (MV), AV/MV. Where the assessment ratio is uniform across properties with the same market values, then there is horizontal equity. It is used to assess equity of property taxation in similar neighbourhood with same property values. According to Cornia and Slade (2005, p. 19) "--equity in property taxation is perceived to exist if there is both vertical and horizontal equity within the tax jurisdiction."

Equity in property taxation exists when all properties in a jurisdiction are subjected to the same effective tax rate (Allen and Dare, 2002). This is when properties are taxed at the same percentage or proportion of their market value.

2.4. The Property Tax Administration Process and Equity

The property tax administration process has an impact on equity of the taxation system. The process is very important because its effectiveness affects the amount of revenue generated. It also has an impact on equity and efficiency (Kelly, 1999; Bird and Slack, 2002). The property tax administration process involves the following:

a) Defining the tax base
b) Determining the properties to be taxed by ensuring there is adequate coverage
c) The property valuation process
d) Setting the tax rate
e) Collection and enforcement of tax payment

Table 2-1: Property tax administration functions and the four critical ratios

Property tax function	**Objective**	**Action**	**Critical ratio**
Tax base identification	To determine what will be taxed	Identify the tax base (land and buildings) Identify the exemptions from the tax base.	Coverage ratio
Tax base valuation	To determine how the tax burden will be distributed among the taxpayers	"Weight" the tax base (either by area, other characteristics or value) Influence the distribution of the tax burden among the taxpayers	Valuation ratio
Tax assessment	To determine how much tax will be levied To determine how the tax burden will be distributed among the taxpayers	Determine the overall tax level Influence tax burden distribution among taxpayers through varying effective tax rates	Tax ratio
Tax collection	To collect tax	Issue and Deliver the Tax Bills Collect the tax	Collection/enforcement ratio
Tax enforcement	To determine how much revenue will be collected though enforcement	Enforce against noncompliance (sanctions and penalties)	Collection/enforcement ratio
Tax (and valuation) appeals and resolution	To ensure that the tax is equitably administered	Resolve disputes concerning the property information, valuation, or tax assessment	(linked to Coverage, Valuation, and Tax Ratio)
Taxpayer service	To provide service to the taxpayer	Taxpayer Education Taxpayer Service	Linked to Collection Ratio (i.e., good taxpayer service will encourage higher collection ratio)

Source: Adapted from Kelly (1999, p. 10)

This research will examine the property administration processes that have an impact on equity of property tax base and coverage as highlighted in Table 2.1 above. The collection and enforcement processes are beyond the scope of this research.

2.5. The Property Tax Base

The property taxation system should aim at broadening the tax base so that all the taxable properties in the taxing jurisdiction are captured in the system (Dillinger, 1992; Kelly, 1999). Any change in the property tax base affects the distribution of the tax burden and equity of the taxation system (Ulbrich, 2011).

2.5.1. Types of Property tax bases

A tax base is the good or service on which the tax is levied ((Hardwick *et al*. 1999). The tax base in property taxation is what is taxed. It can include the vacant land with no improvement, capital value, rental value, or area rating. Taxes can also be ad valorem, where the tax is at a percentage rate of the value of the good (Hardwick *et al*. 1999).

The definition of the tax base is a policy issue (Kelly, 1999; Un-habitat, 2011). Whether the base is on the land only or land and the improvements, is determined by the law governing property taxation. It also stipulates the properties that are taxable and the exempt properties.

There are mainly four types of property taxation adapted by various countries in the world. These vary based on the base of taxation (Norregaard, 2013 and Bahl and Linn, 1992). These are land or site value taxation, annual value taxation, capital value taxation and area-based systems. These forms the basis of value upon which the tax is assessed. The tax base is an important element of tax policy because it influences how the tax burden is distributed (Dillinger, 1991).

2.5.1.1.Capital Value system

Under the capital value system, the tax base is the open market value of the property, which includes the land and improvements for those properties that are developed (Norregaard, 2013).

According to Norregaard, (2013) there are divergent practices on this system among countries. Some countries have different tax rates for land and improvements, with the land element of the property taxed at higher rates. These include Botswana and some cities in Brazil. Countries such as South Africa base the tax assessment on the total capital value of the property which includes the land and the improvements.

According to Bahl and Linn, (1992) and Norregaard, (2013) the system is costly to administer because of requirement for valuation of properties which includes both land and buildings. Personnel such as professional valuers are required to carry out valuations. It is also difficult to get up to date data on market transactions and this affects the validity of the assessed market values.

However, Norregaard, (2013) notes that this system can be said to be more equitable because the property values reflect public investment in infrastructure provision. Therefore, capital value assessment adheres to the principle of benefit received. The value of the property is also a more reflection of the market value especially where revaluations are regularly. In addition, there is more revenue collection under this system since the tax base includes both land and buildings.

2.5.1.2.Annual Rental value system

Under this system, the basis of taxation is the estimated annual rent that can be realised in a fair market transaction (Harvey, 1996 and Norregaard, 2013). Just like the capital value system, the annual rental value system relies on the property, the land and the improvements thereon. The difference is that the base is the annual rents that accrues or are estimated to accrue from the property, not the market value of the property.

The annual rental value of a property includes land and improvements thereon for a developed property (Harvey, 1996). The net rent is arrived at by establishing the gross annual rental value that the property is expected to let for in each period which is usually annual, less the expenses of running the property such as maintenance and insurance. The tax on rental value is payable even when the property is not let because the rent is hypothetical not the actual rent, unlike tax on rental income where the tax is paid only when income is received (McCluskey *et al*. 2005).

According to Bahl and Linn (1992) and Norregaard, (2013) this system of property taxation has some disadvantages. The adjustment that are made for expenses often poses a challenge because the deductions are usually arbitrarily and subjective. Rent controls by the central government places caps on rent increases thus affecting market rents. This in turn reduces the revenue collected.

Further the assessment is difficult for properties that are rarely in the rental market such as owner-occupied houses, industrial properties and vacant land. Exemption of properties from taxation reduces the rental value and this leads to inadequate revenue. Properties that are usually exempted include government owned properties, religious and charitable institutions and owner-occupied houses in some countries. There is also a challenge of how to accommodate vacant land especially in developing countries (Franzsen and McCluskey, 2013).

Annual rental value is an ideal tax base where there is a vibrant rental market and required skilled Valuers to carry out valuation (Franzsen and McCluskey, 2013). It provides reasonable proxy of the benefits received by a property including proximity to schools, recreational facilities and hospitals.

This property taxation system is mainly used in former British colonies including Nigeria, Malaysia and India (Norregaard, 2013). In Kenya, the annual rental value system was first introduced by the British government in Mombasa Town in 1921 but was abandoned in 1928.

2.5.1.3.Land/Site value taxation

Land value taxation is a compulsory payment to the taxing authority based on the market value of the bare land with no improvements (McClusksey *et al*. 2005). In Kenya the tax is called land rates and it is an annual payment to the local authorities within whose jurisdiction the land is located. The land rate is usually an annual payment based on certain percentage of the land value. The argument for taxing land is that land is a gift of nature and its supply is limited. Any earnings accruing to land are not because of any effort on the part of the landowner but emanate from the community effort. Land value taxation is one of the oldest forms of taxation with ancient roots since the introduction of agriculture and

was initially based on the crop yield. The physiocrats who believed that the wealth of nations was derived from the value of agricultural land, called for the abolition of all taxes and the retention of only a single tax on land (McClusksey *et al*. 2005).

The theory of land value taxation emanates from economists such as, Adam Smith, 1723-1780; Davis Ricardo, 1772-1823; John Stuart Mills, 1806-1873 and Henry George, 1879. In 1776, Adam Smith published the Wealth of Nation in which he analysed the effect of land value tax and noted that it would not reduce production, and would therefore not affect economic activities on the land. He advocated for taxing land value to finance government expenditure.

Ricardo 1772-1823 developed the theory of land rent at a time when most of the land in Britain was owned by large land owners and the farmers were tenants. According to him, rent for land should be the residual after paying for labour and capital which are variable factors of production. Land value is the earnings accruing to land in the production process. It is based on the next best alternative that land could be based on, which is the opportunity cost. Due to its fixed nature, a tax of unimproved land will not affect its supply and the economic activities that are carried out on it. The tax is borne by the property owner and is not passed on to the tenants.

In his book, On the Principles of Political Economy and Taxation (1821, p.127) Ricardo says, "A land-tax, levied in proportion to the rent of land, and varying with every variation of rent, is in effect a tax on rent; and as such a tax will not apply to that land which yields no rent, nor to the produce of that capital which is employed on the land with a view to profit merely, and which never pays rent, it will not in any way affect the price of raw produce, but will fall wholly on the landlords. In no respect would such a tax differ from a tax on rent. But if a land-tax be imposed on all cultivated land, however moderate that tax may be, it will be a tax on produce, and will therefore raise the price of produce."

George (1879, p. 421) states "The tax upon land values is, therefore, the most just and equal of all taxes. It falls only upon those who receive from society a peculiar and valuable benefit, and upon them in proportion to the benefit they receive. It is the taking by the community, for the use of the community, of that value which is the creation of the

community. It is the application of the common property to common uses." He proposed a single tax on the unimproved value of land as a source of financing government expenditure. Econlib.org notes that in George's opinion, unimproved value was naturally inherent to the land and taxing it will therefore not discourage improvement and would not affect the land price. Econlib.org further notes that George was against exclusive ownership of land and instead of confiscating land, he advocated for confiscating of land rent from the landowner for the use by the state.

Mills, 1806 -1873 also advocated for taxing the unearned value in land that accrued to the landowners. In his book "Principles of Political Economy" 1848 (Econlib.org), he says, "Landlords grow rich in their sleep without working, risking or economizing. The increase in the value of land, arising as it does from the efforts of an entire community, should belong to the community and not to the individual who might hold title."

Winston Churchill also supported taxation of land value as he argued that its value increased as a result of government expenditure on infrastructure services. In his 1909 speech on land monopoly, he says, "Roads are made, streets are made, services are improved, electric light turns night into day, water is brought from reservoirs a hundred miles off in the mountains -- and all the while the landlord sits still. Every one of those improvements is affected by the labour and cost of other people and the taxpayers. To not one of those improvements does the land monopolist contribute, and yet every one of them enhances the value of his land. He renders no service to the community, he contributes nothing to the general welfare, he contributes nothing to the process from which his own enrichment is derived."

Land value taxation was therefore advantageous in the 18th century since vacant land was in plenty and the government was encouraging land development by taxing the land element of property. Also, there was not high demand on the government to provide for services for its citizenly.

However, with increased population growth in urban areas, the demand for urban services has increased. Taxing land value only narrows the tax base and therefore there is need to

tax the land plus the improvements. This will widen the tax base, improve on property tax equity, and result to increased revenue generation.

According to Bahl and Linn (1992), UN Habitat (2011), Brunori *et al*. (2006) and McCluskey *et al*. (2007) land and property taxation has the following advantages; -

a. Land is immovable. This is unlike taxes on income where income earners can relocate or move their businesses to other locations. It relies on land and buildings that are geographically fixed.
b. Due to the fixed nature, the property provides a form of collateral for taxes due from the owner. The taxing authority can therefore foreclose the property to recover unpaid taxes.
c. It is reliable and stable. Though tax on land can influence land use, it cannot change its location.
d. It is in accordance to the benefit principle of taxation. Site values are as result of the services that are available at the site. These include accessibility due to road network, amenities such as water, electricity. A site owner will be willing to pay for the services in a certain location. Increase in land values mainly result due to public investment in infrastructure and services and land use decisions made by local governments. The local governments should therefore be able to 'capture' part of the increase in land values to finance the repayments for the public investments. Land and property taxation can be used to accomplish this. The revenue obtained is therefore used to fund urban provision of urban infrastructure and services.
e. It promotes citizen participation in local governance and decision-making. Citizens are willing to pay taxes when they can see the improvements undertaken by the local government. This encourages transparency and accountability in government.
f. Land value taxation encourages development in land resulting to densification and reducing urban sprawl. It therefore promotes efficient land use. This is unlike the property tax that can discourage development as it is a tax on investment.
g. It discourages ownership of land for speculative purposes. Tax on idle land will motivate the landowner to put the land into productive use to be able to pay the tax.

However, Cornia and Slade, (2005) note that if the tax is not well administered it may result to land use distortion and create excess burden for capital investment.

h. It involves minimum administrative costs making it easy to levy. This is unlike capital-improved value that involves assessment of the value of the improvements.
i. Batt, (1999) also notes that ad valorem tax on land is equitable. Citizens who own title to more land will pay more taxes and those who do not own land will not pay any taxes. Also, the tax burden is mainly borne by the site owner and is not shifted to the tenants.

Land value taxation has several disadvantages. The main disadvantage of land value taxation is that it does not tax improvements on the land. The essence of taxation is to tax wealth. Therefore, by taxing land only, wealth in terms of buildings and improvements on land is exempted. This can have distortionary effect on the economy with some wealth people being left out of the tax bracket. It is therefore argued that land value taxation is not equitable because in urban areas with massive land developments, the owners pay a small proportion of their property wealth as tax. The tax does not adhere to the ability to pay principle on taxation (McCluskey, 2007).

The other disadvantage is that land value tax may not generate adequate revenue especially for developed urban areas since the tax base is smaller as compared to tax on land and improvements. This makes it less flexible that the tax base that includes capital developments. In central business districts where most properties are developed, it means that such developments are exempt from taxation.

For developed land, it is difficult to separate land from the development. Once land is developed with improvements, estimates of the site or bare land value can only be hypothetical and it is subjective. This cannot be market value as market value can only be established under market conditions by the forces of demand and supply.

In urban areas, most land though vacant has some form of improvements such as fencing and improved drainage, accessibility through road network. Therefore, an unimproved site does not exist in practice. The value that is used to assess land value taxation is therefore a hypothetical value.

Rothbard, (1997) argues that holding idle land for speculation purposes is not a disadvantage. Not all land should be brought to production. The speculative owner holds idle land until such a time that it is beneficial for him to sell it and make profits, which is the essence of market economy. He also argues that capital investment is a factor of time in the production process. People abstain from consumption and engage in investment over time which results in capital development on land. Land value taxation discourages holding of vacant use of land where economic use of the land is not fully developed.

However, it is argued that the advantages in terms of the revenue collected can far outweigh the cost of administration. This is because land taxation is the basic and simplest form of taxation. However, as urban development is achieved it is important to incorporate development in the taxation. This will also lead to increased revenue generation.

Bahl *et al*. (1983) quotes Carl Shoup (1978) who give the following reasons for the neglect of the property tax as a source of local government's revenue in developing countries: -

a. Political and vested interest is given as major reason for this neglect. Shoup (1978) notes that most of the prime commercial and residential urban properties are owned by important government officials and the families and influential families. They are therefore able to influence property taxation decisions in their favour and are unwilling to pay high taxes. The middle-class income housing is substantially low in these countries and does not form an adequate tax base.
b. There is reliance on the central government for most public services such as schools, hospitals and security. The rich can afford these services in the private market and are not really concerned when there is neglect in provision of these services by the Government. Their children attend high cost schools and the families are treated in costly private hospitals. Some of the rich can get these services abroad and therefore the local services are left for the low-income groups who are not able to influence political decisions.
c. There is imperfect land tenure, which makes valuation process difficult. The existence of informal land markets with most of the land not registered poses a problem to the tax base. Comparable sales are also not easy to get due to lack of data.

To address these problems, Olima (2005) also suggested that there is need to reform the rating system based on equity, economic efficiency, and ability to implement land value taxation. Bahl *et al*. 1983 also proposes decentralization of local governments and simplification of the property tax design to address most of the problems that plague the use of property tax as a source of local government revenue in developing countries.

The Nairobi City has been relying on a valuation roll that was carried out in 1980. To raise revenue, the City has been increasing the percentage of rates. This increases inequalities by increasing the incidence of tax on those landowners who are on the property roll. It however does no lead to increase in revenue base by increasing the tax base.

Land or site value taxation is currently used in former British colonies of Kenya Australia, New Zealand, Denmark, Estonia and Jamaica (Norregaard, 2013).

2.5.1.4.The Area based system

The property tax under this system depends on the location. The tax base may be on area of vacant land irrespective of the developments or it can be based on per unit area of buildings (Norregaard, 2013). It is easy to administer but as Norregaard, (2013) notes, the tax base is limited, which affects revenue collection.

According to Konyimbih (2000) this taxation system is inexpensive to administer and easily understood by the taxpayers. It however does not adhere to the ability to pay principle since the tax paid for same size of land in each geographical area is the same, irrespective of its market value.

It is considered as an unfair tax because the tax is based on location not on market value of properties, which makes it regressive. It is used in many developing countries and Eastern European countries where there is lack of land sales data due to undeveloped land markets. It is currently in use in Kenya and in Nairobi City it is used in the mainly agricultural suburbs areas of Embakasi.

Table 2-2: Comparative property tax policy for Tanzania, Uganda and Kenya

	Tanzania	**Uganda**	**Kenya**
Tax Base	Buildings	Land and Buildings	Land
Is Government Property Taxed?	**No,** although the Urban Authorities (Rating) Act allows Minister to authorize the Government to pay a payment in lieu of rates. In practice, this has never been done. In 1997, the Government issued an order explicitly exempting government buildings, among others.	**No,** although the government is not exempt from paying the property rates, the central government **does not** pay their property tax.	Yes, Contributions in Lieu of Rates (CILOR) is mandatory in the Rating Act. Although the Government has not paid the CILOR in full—they do make some payments each year. Since 1998, as part of the Kenya Local Government Reform Programme, the Government is moving towards full payment of CILOR.
Assessment Basis	Flat Rating (and/or) Capital Value (Cost Approach)	Annual Rental Value	Area Rating (and/or) Unimproved Site Value
Tax rates	Flat Rate (No Limit but with Ministerial Approval) Ad Valorem (No Limit, but with Ministerial Approval)	Ad Valorem (up to 20%)	Area Rating (No Limit, but with Ministerial Approval) Ad Valorem (up to uniform 4%, with override provision subject to Ministerial Approval)

Source: Adapted from Kelly (2000)

In East Africa, Uganda uses Annual rental value as the basis of local government taxation. This incorporates the improvements on the land, which is in contrast with Kenya where the improvements are not considered. Tanzania also relies on capital value rating though area rating is also use. This is highlighted under Table 2-2 Above.

Table 2-3: Alternative property tax bases by regions in the world

Region	No. of countries	Land value	Capital improved value	Land & improvements	Improvement only	Annual rental value	Area rating	Flat rate
Africa	25	1	8	3	4	7	11	6
Caribbean	13	4	4	2	0	8	5	0
Asia	24	2	6	2	0	11	11	0
Oceania	7	6	2	0	0	4	0	0
Western Europe	13	0	9	0	0	6	0	0
Eastern Europe	20	1	6	0	0	0	15	0
Central and South America	16	2	14	1	0	1	0	0
North America	3	0	3	0	0	0	0	0
Total	121	16	52	8	4	37	42	6

Source: Adapted from Norregaard (2013)

In Africa, there is only one country which has adapted the purely land value taxation, that is Kenya. Western European countries use annual value and capital value as the basis of property taxation that both rely on the land and the improvements as the tax base. None of the countries uses land value taxation while only one country uses this tax base in Eastern Europe.

Of the four bases of taxation, the capital value base is the most equitable. Its base includes the value of the property which includes land and the buildings. Valuations need to be done frequently to highlight changes in the market and to bring the tax base as close as possible to the market value. Some countries have recently moved from area-based system to value based property taxation. These include Rwanda in 2011, Sierra Leone in 2004 and Cameroon in 2007 (Franzsen and McCluskey, 2013).

2.5.2. Identification of the properties to ensure maximum coverage

The tax base, as per the legal definition of the tax, should be identified so that it can be taxed (Kelly, 2013). This is done in relation to the provided legal definition of the tax. Identification of all the taxable properties in a jurisdiction is then done, followed by assessment and compilation of the assessment roll with the property details (Kitchen, 2013). The roll number serves as the link between the tax assessment information, tax billing and property transfer records.

Once the properties are identified, a fiscal cadastre is prepared. Full fiscal cadastre is the basis for an effective property taxation (Bahl and Linn,1992). UN (2005) defines a cadastre as a set of records about land that consists of two parts-

i. a series of maps or plans showing the size and location of all land parcels;
ii. text records that describe the attributes of the land.

A fiscal cadastre is defined as an instrument for administering land and property tax policy which can also be used for other land taxes such as inheritance tax or estate duty or taxes. This is different from the land registration system which mainly contain information of the ownership of land (United Nation, 1996).

UN (2005) further notes that the function of the cadastre is to collect and make available graphic and textual information in support of title registration, property valuation and land resource management.

Dillinger (1991) and Kelly (2013) give two ways in which property identification can take place. The first one is through self-declaration as happens in Turkey and Peru. Though this is a cheap process, it is not reliable as it is prone to abuse. Turkey, where Dillinger (1991) says there has been a bit of success charges heavy penalties if a taxpayer provides wrong information. This can be enhanced by property tax legislations that require tax-payers to self-declare (Kelly, 2013). The government officers also carry out field visits to verify the information provided in the validation exercise.

The second method is through government inventory, which is the most commonly used method. This method is expensive as the government has to hire personnel to carry out

field surveys in order to capture all the taxable properties within the taxing authority's area of jurisdiction. The process establishes a complete inventory of all the property within the jurisdiction.

According to Kelly (2013) the taxing authority should rely on partnership approach to gather and keep up to date data on the fiscal cadastre. This can be obtained from government agencies in charge of public works, housing and lands records; private sector such as lawyers, real estate agents, banks; and individuals handling property tax related information. There should be a requirement for submission of information with a penalty for failure to submit.

Some minimal information is required for the property tax fiscal cadastre (Bird and Slack, 2002). This includes a description of the property, definition of its boundaries using cadastre maps, ownership, the value of land and improvements depending on the adapted definition of value.

The information on the property valuation register should be regularly updated to ensure that it is current and a true reflection of what is on the ground.

The following are the main challenges facing property identification process in developing countries (Bahl and Linn, 1992; Bird and Slack, 2002; Macluskey, Cornia and Walters, 2012).

a. Poor updating of the property base. They note that in Kenya the fiscal cadastre and valuation rolls include only between 20% and 70% of the total taxable land.
b. The information that is used to support the fiscal cadastre is uncoordinated. There is poor coordination between the various departments that deal with properties in the central and the local governments. Data on building permits and property transfer may not be provided to the taxing authority. Property ownership data may also not be provided due to ownership disputes.
c. There is poor monitoring and recording of the property transfers data. Information that is valuable for property valuation process is not availed to the Valuers. This include sale prices, change in ownership and new construction (Bahl and Linn, 1992).

In Kenya, the sales transfers are recorded at the land registry which in under the Ministry of Lands, Urban and Housing Development. The local government should be able to access this information which should assist in coming up with credible property values. The other challenge is the under declaration of property values as property owners try to evade paying stamp duty tax.

d. In most developing countries, the property records are not computerised and are not kept in an orderly manner. The manual systems affects accuracy of records which erodes the fairness of the property taxation system.
e. The problem of informal settlements also hinders the developement of a fiscal cadastre. Most of the urban residents in informal areas live on land to which they or their landlords have no legal title to. Even if this land is put under the cadastre, the challenge would be who to bill for the tax.
f. Inadequacy of maps for proper property identification
g. Tax records may be identified by the tax payer not by the property owner.

These challenges means that not all the properties in the taxing jurisdiction are captured in the tax register resulting to incomplete taxation registers. This results in properties which are eligible for taxation being left out of the taxation system. This not only impedes equity in property taxation but also reduces the revenue collection of the local authority. The property coverage ratio should be up to date and close to a hundred percent (Kelly, 1999). This is important to ensure equity and also adequacy in revenue generation.

One of the challenges of the current system of the cadastre in developing countries is the storage of cadastral unit attributes and map data in different systems (Elachi and Semlali, 2001). In Kenya, the maps that support title registration are not standardized. There are different types of maps with varying degrees of accuracy (Siriba *et al*. 2011). The survey plans are used in urban areas while the registry index maps are used in rural areas. The maps once created during the initial registration are amended after sub-divisions or amalgamations. Survey plans are more accurate than other types of maps because they rely on more precise methods of measurements and are based on fixed boundary survey. They are however expensive to carry out especially in developing countries.

The registry index maps (RIMs) are based on general boundaries demarcated by natural or man-made features such as roads and rivers. This makes them "inaccurate; they are only indicative and not legally binding" (Siriba *et al*. 2011)

Siriba et al. (2011) notes that in Kenyan, "cadastre is parcel-based and contains mainly privately-owned land parcels. This is because there has been no systematic approach to register and map publicly owned lands. Besides, no buildings are included in the cadastre."

According to Bishop, *et al*. (2000), most developing countries, including Kenya have challenges in developing spatial data infrastructure. These include; -

i. Diverse and uncoordinated laws relating to land registration, planning and management. This makes standardization of spatial data difficult.

ii. The presence of informal settlements in most cities of developing countries poses a challenge in developing of spatial data infrastructure. Land tenure and ownership is not well defined.

2.5.3. Partnerships approach for property information

In ensuring maximum property base coverage, the taxing authority should regularly update its records. The taxing authority should rely on partnership approach to gather and keep up to date data on the fiscal cadastre from government agencies, private sector and individuals handling property tax related information (Kelly, 2013).

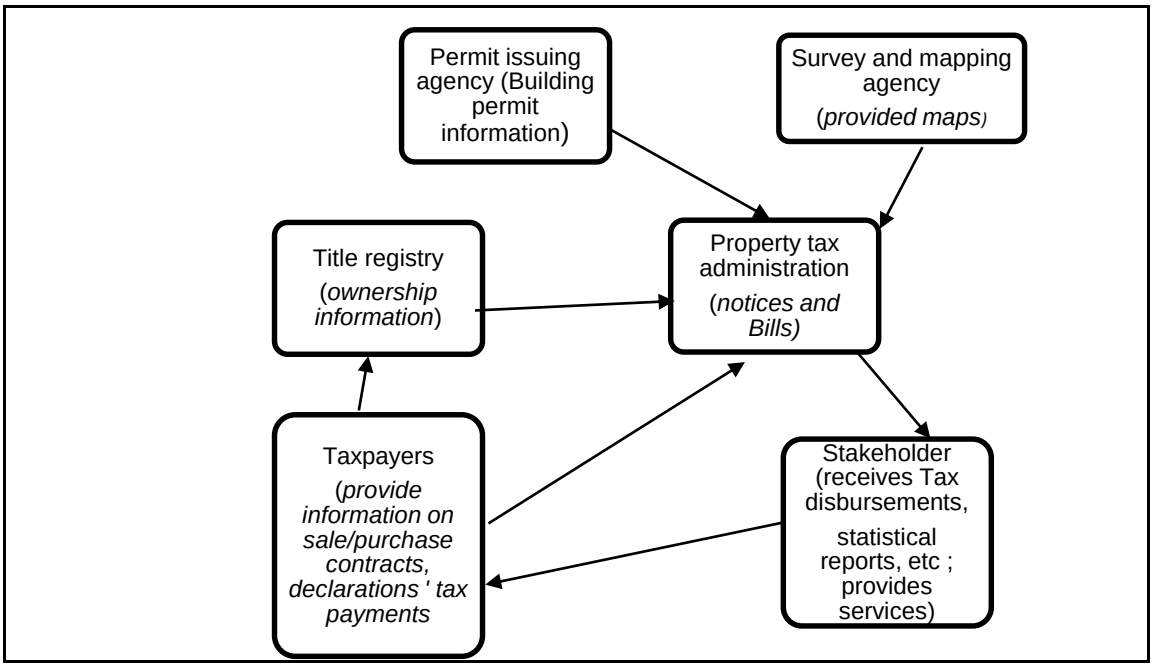


Figure 2-1: External Linkages within a property tax system

Source: Adapted from Almy (2002)

2.6. Exemption and preferential of properties

Exemption from taxation is an important component of property taxation. Exemptions are mainly done with the objective of promoting social justice, reducing property taxation administrative and collection costs by exempting low yielding properties and exempting properties that provide either directly or indirectly services that are considered public goods (Prakash *et al*. 2009).

There are different forms of exemptions based on property ownership, use and characteristic of the property owner (Kell, 2013 and Slack, 2013). Most exemptions are provided in law while others are through local discretion and administrative practices. Legal definition of property to be taxed in some countries exclude others from taxation. In Sweden property tax is levied on residential properties only (Franzsen and McCluskey, 2013).

Exemptions based on property use include exemption of properties used for religious, education, diplomatic and health purposes. Some countries provide an exemption threshold to eliminate low value properties.

De Cesare (2012) notes that in the Dominican Republic, the tax is only on properties with a value of US $ 150,000. In Latin America, exemption and tax reliefs are provided for social purposes to the elderly, retired and low-income families (Kelly, 2013).

According to Grover *et al*. (2016), some countries operate a complex exemption system. "In Moldova exemptions from the real property tax amount to 27 percent of the maximum tax revenue on individuals and 55 percent of that on entities. The loss of income is made worse by a discount of 15 percent if taxpayers pay at least six weeks before the payment deadline for the first half of their tax bill".

Some exemptions are geared towards promoting economic development. According to Kelly (2013) ;- " Although quite popular among politicians and business community, studies tend to conclude there is little evidence that these tax exemptions are effective. Property tax should be used as a revenue instrument, not a tool to fine tune economic development and or affect land use development."

In the USA, non-profit charitable institutions are exempt from property taxation. This puts a financial strain on local authorities which have many of these institutions, using urban services by not contributing to financing of the same (Kenyon and Langley, 2011).

Kitchen (2013), De cesare (20120 and Kelly (2013) give the following as the effects of exemptions on property taxation

a. Exemptions reduce the tax base. In India exempted properties comprise about ten percent of the total urban properties and about eleven percent of the assessed properties (Prakash *et al*. 2009). In Chile taxation is only on properties with a value of US$ 30,000 and therefore 60% of the properties in the tax register are exempt from taxation.
b. It is a discriminatory and an unfair practice that can promote land uses that would be different were all the properties treated equally.
c. They are explicit subsidies that affect revenue and economic behaviour.
d. They have an impact on property tax equity and efficiency
e. The practice result to distortion in location and economic decisions made by firms.

Property tax experts recommend that all exempt properties should be included in the tax register together with their full assessment value. This will indicate to the taxing authority the full extent of the exemptions in monetary value (Kitchen, 2013). In some countries properties owned by the state are exempt from taxation. The Constitution of Brazil exempts properties owned by the State and Federal Governments, even where the property is leased to the State (De Cesare, 2012).

Kenyon and Langley (2011) proposes some policy interventions in Cities where there are many charitable institutions that are exempt from property taxation. These include increasing the fees and charges imposed on the charitable institutions to cater for urban service provision. An example is in Houston where a drainage fee was imposed on all properties to cater for road and drainage improvements. The non-profit institutions can also provide voluntary contribution like in kind services. Negotiation can be done with the local authorities where voluntary services are given such as training by public universities. Services in lieu of taxes (SILOT) can also be offered by the non-profit institutions. The law can also be changed to reduce the number of properties that are exempt from property taxation.

2.7. Valuation of the Property Tax Base

Valuation of real estate is the process of developing an opinion of value usually done by a professional Valuer (Appraisal Institute, 2013). Pagourtzi *et al*. (2003) quotes International Valuation Standards which define market value as *"*the estimate amount in terms of money which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arms-length transaction after property marketing where the parties had each acted knowledgeably, prudently and without compulsion*."* This is the definition applied in this research.

The property valuation process should produce an accurate estimate of the market value for it to gain validity (Pagourtzi *et al*. 2003). The valuation of property depends on the system of taxation adapted as discussed above, whether annual value system, capital value, site value or area-based taxation system. The criteria and standards for assessment should be spelt out. The definition of value under the different systems is a policy issue that has an impact on how the tax burden is distributed (Dillinger, 1991).

There are two types of valuation approaches. The first one is direct market survey approach which relies on parcel-based approach to valuation. The second approach is the use of mass appraisal approach that involves extrapolation of property values from a sample of properties (Dillinger, 1991). Individual valuation of properties enhances equity because the property valuation will be almost equal to the market valuation. Also, property values change at different rates in different urban areas. As Bird and Slack (2007, p. 224) says *"*fairness is not achieved when property assessments are merely increased by a common factor on an annual basis."

The manual or traditional valuation approach "relies heavily on expert knowledge and is intensive on manpower resources as each property tends to be individually assessed. In many ways, though, this detailed property-by-property approach can be extremely accurate; however, it is becoming almost impossible for those authorities charged with the assessment/reassessment task to fulfil their obligations. Hence, the significant revaluation lags being experienced in many countries and jurisdictions" McCluskey *et al*. (2002, p. 10).

The property tax assessment process should be uniform within the taxing jurisdiction to ensure that the burden of the local government is shared equitably among the taxpayers (Bird and Slack, 2002). In addition, to enhance equity in taxation, revaluations should be carried out regularly. This ensures that the assessed values are almost a true reflection of the market value. It also reduces the impact of sudden increase in property values and in effect property tax that may lead to discontent with the taxpayer and affect compliance.

Bird and Slack, (2002) also notes that though a property tax system should have an appeal process where the taxpayers who are dissatisfied with the valuation can appeal, this process can inhibit equity in property taxation. The reason for this is that the well-off tax payers are mainly the one who can afford legal redress and are therefore able to appeal a high valuation of their properties. This affects equity of the property tax system.

Property tax valuation in developing countries face many problems (Norregaard, 2013). This includes inadequate valuation professionals, weak administration, under-developed

property market which limits the sales data that can be used in the valuations. These problems lead to property valuations that are usually below the market values.

Bird, (2002) also adds that to enhance equity the revaluation cycles need to be short. This is usually stipulated in legislations. In most countries revaluations are done after three to five years.

Table 2-4: Comparison of valuation techniques

Appraisal techniques	**Advantages**	**Disadvantages**
Self-appraisal	- Inexpensive - No appeals	- Inequitable - Expensive to verify - Tendency to underestimate - Unstable tax base
Expert appraisal	Realistic value	- Expensive to establish and maintain - Subjective with each expert giving a different value - Encourages appeals
Area based-differentiated by area within a city	- Inexpensive - No appeals	- Different from real value - Inequitable - Leads to segregation - Defining areas will be a political not a professional decision
Calculated value	- Realistic value - Objective - Value modification is inexpensive - Lowers number of appeals and chances of successful appeals	- Relatively high introduction cost /cost of database - Does not prevent appeals

Source: Adapted from Balsa and Kovacs (2004, p. 261)

2.7.1. Approaches to property valuation

The market value of property is usually determined by three approaches; - sales comparison, cost and income approaches.

2.7.1.1. Sales comparison approach

This method is mainly used under land value and capital value systems of property taxation. The market value of land or land and improvement is estimated by reference to comparable sales data of similar properties that have been realised under market conditions (Peden, 2012). No two properties can be identical. Therefore, the Valuer must adjust for differences in age, quality of construction, date of sale and the neighbourhood characteristics (Pagourtzi, *et al*. 2003). The method is very reliant of availability of sales data that must be accurate, complete, and timely (Pagourtzi, 2003).

2.7.1.2. Income approach

The income approach is used in estimating the value of income producing properties. To arrive at market income, the data from similar properties in the neighbourhood is used and the annual income flow is capitalized to arrive at an estimate of market value (Peden, 2012).

This method focuses on the demand side of the property market. The property must be able to fetch some incomes in the form of rent from the market. Where a property is owner occupied, comparable rental properties are used as the basis of market rent. However, this method is limited in special properties which cannot fetch market rents. In South East Europe, most residential properties have controlled rents which limit the use of this method (NALAS, 2009).

2.7.1.3. Cost approach

This method is mainly used in valuation of developed properties which are rarely sold in the market and do not generate income such as owner-occupied properties (Pagourtzi *et al*. 2003). Estimation of the value of vacant land is based on comparable sales of similar properties. The cost of the improvement is estimated by use of replacement or reconstruction cost of a new development which is adjusted for depreciation and

obsolescence depending on its condition. The value of the vacant land and the cost of improvements are added up to come up with an estimate of value (Pagourtzi *et al*. 2003).

Market valuation of property has advantages in local government property taxation. Peden (2012) and De Cesare (2012) note that market value of a property for taxation purposes makes the tax paid a function of the market worth or value of the property which is what the taxpayers can afford to purchase in the market. It therefore links the property value on which the tax is based, to the ability to pay of the taxpayer. This makes the tax system more equitable. The valuation process is also based on set methods of determining value which can either be cost, comparable sales or income approaches as discussed above. The value is therefore not determined in an arbitrary way.

Market valuation is more equitable because it is based on current data in the market which reflects the changes in the area such as improved service provision. With market valuation, similar properties in the neighbourhood will be valued at the same values and will therefore have the same tax bills. The tax burden is therefore fairly distributed according to the property value. Valuation of property for tax purpose at their market value is likely to improve the perception of the taxpayers on fairness of the property tax thus promoting their acceptance of the property taxation system.

Despite the above advantages, Peden (2012) gives the following as the disadvantages of using the market value to assess tax;-

i. Market valuation faces criticism that it does not insulate the tax payers against sudden changes in the market. An example is during the housing bubble in the United States of America where there was increase in property values in the 2000s which resulted in corresponding increase in the property tax. Peden (2012) notes that in 2005, data on house price increases indicated that values had risen up to fifty times over this period. Though the property values may increase it does not necessarily lead to corresponding increase in incomes of the home owners and they are therefore not able to afford the increased property taxes. This applies especially for retired home owners.
ii. Time lags between revaluations results in outdated values that are not a true reflection of the market. Also if there is an error in the valuation, it means some taxpayers will be

paying higher or lower taxes until the next revaluation when this can be rectified. This affect equity of the property tax.

The administration of land value taxation has faced many challenges in Kenya (Kelly, 2003 and Olima, 2005). These include incomplete revenue base; low collection; poor enforcements by only relying on withholding of rate clearance certificates to clear outstanding debts, lack of political will, and poor administration especially on valuation rolls.

To address these problems, Olima (2005) suggested that there is need to reforming the rating system based on equity, economic efficiency, and ability to implement land value taxation.

2.7.2. Valuation cycles

Having appropriate valuation cycles is one of the major challenges of property taxation in the world. The property market keeps on changing. It is affected by the economic condition in the country and by demand and supply. This results in changing property values. Regular valuation of property can capture the changes in value. Ideally, revaluations should be done annually but this is not possible even in developing countries (World Bank, 2009). Where long periods elapse before revaluation is done, the market values are eroded. The tax base is then not based on ability to pay, resulting to inequity in property taxation.

Periodic or frequent valuations and revaluations are important to keep the value in the tax register up to date and to reflect the market situation. This enhances equity in property taxation. As argued by Kitchen (2013, p. 12) *"*In value-based systems, a shorter time frame for reassessment is preferred because this helps in maintaining the legitimacy of the tax base and it reduces the risk of sudden and dramatic changes in tax burdens that often arise when reassessments are conducted sporadically and infrequently*"*. World Bank (2009) adds that frequent valuations also improve the credibility of the property taxation process and increase its transparency. Infrequent valuations result to property owners who benefit from the out-dated valuations and will therefore oppose any revaluations, resulting to political resistance to property taxation.

Table 2-5: Statutory valuation cycles for rating in selected countries in Africa

Country	Valuation cycle	Remarks
Botswana	Max 5 years	
Kenya	Max 10 years	
Lesotho	3 years (+3)	The legislation states 3 years, but the responsible minister may extend it annually for an overall maximum of 6 years (i.e. a further 3 years).
Malawi	Max 5 years	
Namibia	Max 5 years	
Swaziland	Max 5 years	
Uganda	5 years (+)	The minister responsible may approve an extension

Adapted from Franzsen (2002)

Almy (2002) notes that property tax systems are dynamic and not static. They should operate within a time frame given that the tax itself is annual. The reassessment should be periodical with set time frames. The valuation cycles should be short with the goal to have revaluations done every after three years but not more than five years (Bell, 1999).

2.7.3. Computer Assisted mass Appraisal

Kontrimas and Verikas (2009, p. 443) define mass appraisal as "the systematic appraisal of groups of properties as of a given date using standardized procedures and statistical testing." The aim of mass appraisal is to arrive at the value of the property. The mass appraisal models are mainly based on the sales comparison method of valuation. Linear regression, neural networks and support vector machines are the main models usually used.

Local authorities must value huge numbers of properties within their area of jurisdiction. The parcel-based valuation method involves a Valuer visiting every property and ascertaining its details. This is a cumbersome, time consuming and expensive exercise. Mass appraisal is therefore a more cost effective and efficient way of assessing the value of several properties in each period (NALAS, 2009).

Table 2-6: Properties valued for tax purposes in some taxing jurisdictions of the world

City	Number of properties(millions)
Ontario, Canada	4.70
British Columbia	1.88
Jakarta	1.60
São Paulo	2.76
Bogota	1.78
Kuala Lumpur	0.46
Bangalore	1.16
Johannesburg	0.81
Hong Kong	2.35
Western Australia	1.90
Cape Town, south Africa	0.73

Source: Adapted from McCluskey *et al*. (2013)

To address these problems faced by developing Countries in property taxation, Norregaard, (2013) proposes the use of software tools such as computer- assisted mass appraisal (CAMA system). In CAMA a price index is estimated from comparable sales of type of properties in an area such as residential properties. This index is then used to value other properties.

According to IVSC (2007) the process of carrying out mass appraisals involves the following;-

a. identify properties to be appraised
b. define the market area in terms of consistent behaviour on the part of property owners and would-be purchasers
c. identify characteristics of supply and demand that affect the creation of value in the defined market area
d. develop a model structure that reflects the relationship among the characteristics affecting value in the market area
e. calibrate the model structure to determine, among other attributes, the contribution of the individual property features affecting value

f. apply the conclusions reflected in the model to the characteristics of the properties being appraised
g. validate the adopted mass appraisal process, model, measurements or other readings including the performance measures, on an ongoing basis and/ or at discrete stages throughout the process
h. review and reconcile the mass appraisal results.

Though mass appraisal is more efficient than parcel based valuation method, it is criticised because of the high initial cost of introduction. It also relies on highly trained and specialised staff, and extensive database to analyse data (NALAS 2009). These resources may be lacking in most developing countries.

Mass appraisals enhances equity in the valuation process. As IAAO (2013) notes, “the use of CAMA system results in a valuation system characterised by accuracy, uniformity, equity, reliability and low per parcel cost. Except for unique properties, individual analysis and approaches are not practical for ad valorem tax purposes” IAAO (2013, p. 5).

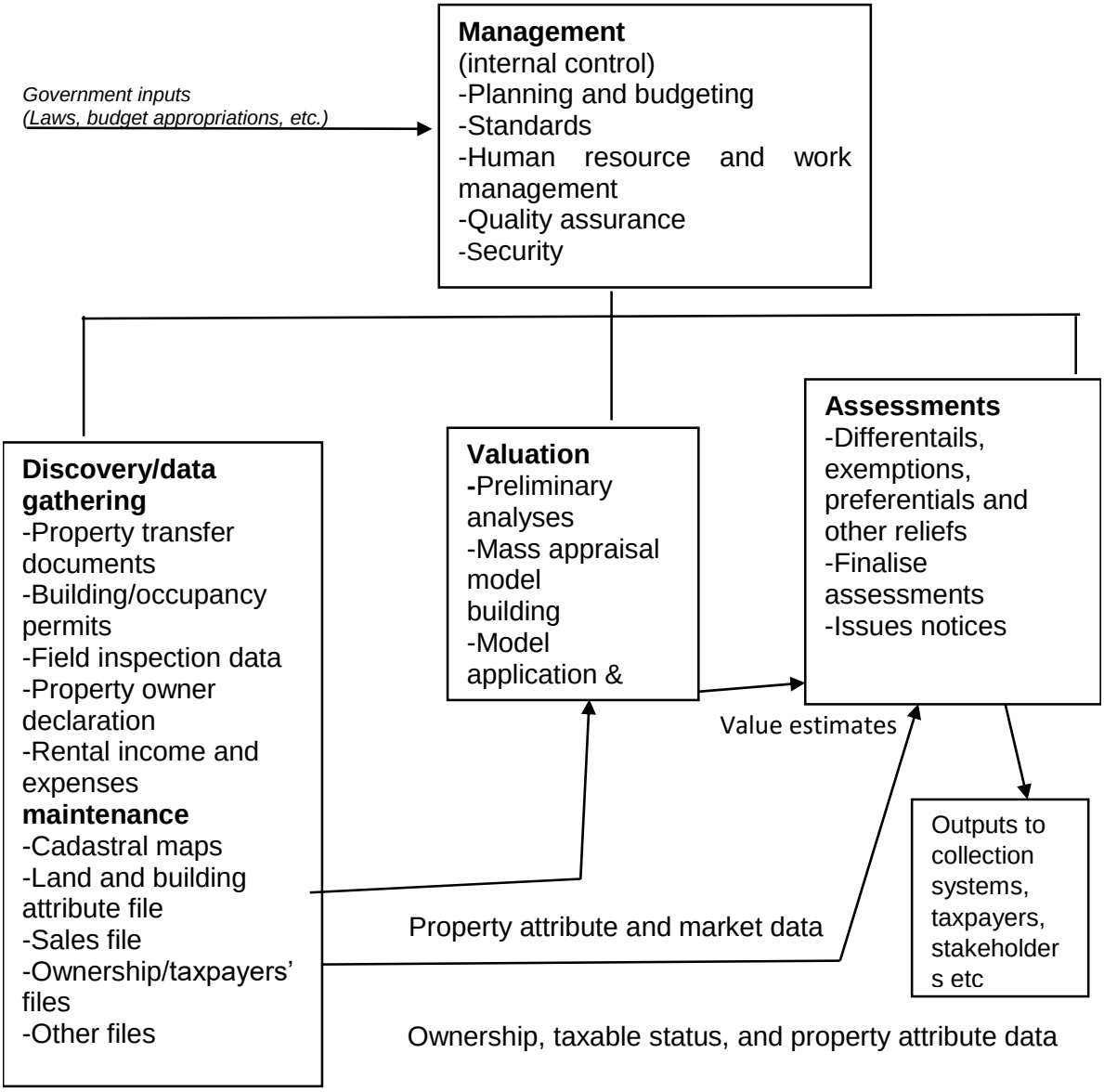


Figure 2-2: The property assessment system

Source: Adapted from Real Property Assessment Systems (Almy, 2002, p. 5)

2.7.4. Monitoring of the valuation process

Monitoring is important in maintaining the legitimacy and acceptance of property taxation (Bell, 1999). Monitoring should be done to ensure quality assurance and uniformity in the valuation process and ultimately the taxation process. The assessment- sales ratio is the main tool used for monitoring the outcome of the valuation process. They are used to ensure accurate and uniform values (IAAO, 2014).

In value-based property taxation systems, assessed rental or capital values should be uniform within groups or classes in a jurisdiction. The property should be assessed at market value as per the legal requirements and professional standards (IAAO, 2014).

There should be consistency and uniformity in property values between and within property groups (IAAO, 2014). Where there is uniformity between property groups, residential properties should be appraised at the same percentage of market value as commercial properties. Consistency is evaluated by measures of central tendencies. IAAO (2014) recommends the appraisal level of each major property group such as residential, commercial, industrial, should be within five percent of the overall level in the jurisdiction.

There should also be uniformity in values within same property groups such as residential properties, low-income and high-income neighbourhood. This is measured by coefficient of dispersion. COD indicate the average percentage deviation from the median ratio. “The lower the COD, the more uniform the ratios within the property group” (IAAO, 2014).

According to Bell, 1999 monitoring the valuation process ensures fairness of the property tax. This promotes legitimacy and acceptance of property taxation among the property owners and other stakeholders. Monitoring and evaluation also enable the National Government to equalize the tax base across several jurisdictions. The property tax capacity is then used as an instrument in allocation of local government transfer and other non-tax purposes. Annual assessment ratio studies can be conducted in-house where the taxing authority has adequate capacity. In case of inadequate capacity, the exercise can be contracted out.

2.8. Property tax rate.

The property tax rate is related to the tax base and determines how the tax burden is distributed to the tax payers. The main issues in property tax rate setting are; who sets the rate, whether central or local government; is the rate differentiated and is it easily understandable by the tax payers (Slack and Bird, 2014). The rate can be set by the central government or by the local government within limits set by the central government or the local government can have full discretion to set the rate. When setting the property tax rate, a local government should consider its role in service provision and revenue generation. The process of setting the rate by a local government involves determining its projected expenditure, then subtracting all the non-property tax revenue. The balance is the amount of revenue to be funded by the property tax and to arrive at the tax rate the property tax revenue is then divided by the property tax base (Kitchen, 2013). Where a local authority requires raising a certain amount of revenue with a wide property tax base, the property tax rate will be low vis-a-vis where the tax base is narrow, and a high tax rate would have to be applied to raise the set amount of revenue.

Where the local government has the discretion to set the rate, it increases accountability which can promote better service provision, but where the central government sets the rates, it results to reduced accountability (Slack and Bird, 2014).

The property tax rate has an impact on the amount of revenue generated from the property tax base; the equity or fairness of the property tax and the cost of administration of the tax. Zorn (2013) notes that the establishment of the tax rate is largely ignored in the property taxation literature though it is equally as important as the tax base, assessment, and tax collection.

There are mainly two types of property tax rates, namely flat rates and progressive rates (Zorn, 2013). A flat rate is a uniform rate applied to the entire property tax base in a tax jurisdiction. It has the advantage of being simple and easily understood by both the property owners and the tax officials. Its uniformity mean that the revenue generated is easily predicted since the local government can easily calculate the amount of revenue that can be generated from the tax base. Multiple flat rates or differentiated tax rates are also applied by some taxing regimes depending on use, ownership and location of the property.

The differentiated rates can be aimed at exempting low valued properties from taxation while other rates may be progressive and increase with the property values as used in Argentina (Kitchen, 2013). Slack and Bird (2014) notes that business capital is more mobile than residential capital and therefore taxing business properties at lower rates than residential properties can promote business growth. However, due to political considerations, the practice has been mainly to tax residential properties at lower tax rates than non-residential properties since home owners are more likely to vote in local elections than tenants. Favourable treatment of land in the urban fringe can lead to increased land speculation and conversion of land to urban uses resulting in increased land prices (Slack and Bird, 2014). The use of multiple flat rates in a tax jurisdiction however reduces the uniformity of the property tax (Zorn, 2013). Two properties with the same use and assessed values but in different locations may pay different taxes where the tax rates differ based on location. Multiple tax rates also affect the taxpayer perception of property tax where they may perceive it to be unfair; they are also not simple and predictable.

The setting of the property tax rate should be easily understood by the tax payers. The amount of revenue raised from property tax is influenced by transfers from central government and revenue from other sources. In North America, local government budgets must be balanced annually. The tax base changes due to revaluations and the tax rates are then changed. This makes the tax system complicated to the tax payer, though it is more accountable (Slack and Bird, 2014). The tax rates should be set within limits to minimise the effect of distortions caused by the tax (Slack and Bird, 2014).

2.9. Property taxation: Best practices in selected Countries

Best practices in property taxation in United Kingdom, South Africa and USA are examined under the criteria of what are the property tax bases, how they are assessed, the exemptions to property taxation, and monitoring and evaluation of the property taxation process.

2.9.1. Property taxation in The United Kingdom

United Kingdom is a unitary kingdom comprising of England, Scotland, Wales, and Northern Ireland. The UK has a varied structure of Local Authority. Property taxes on residential and non-residential properties are levied differently. Property taxes on

residential properties are also known as council taxes and are set locally while property taxes on non-residential properties are set nationally and are similar throughout the UK.

Until 1990, property tax on all properties in the UK was assessed based on estimated rental value by a central government agency and was charged on the occupant or tenant of the property (Enid, 2014). The last rental value revaluation had been done in 1973 and revaluation to more current values was expected to lead to increased value and raise opposition to the tax. The government briefly introduced a poll tax or community tax on all adults above 18 years old, which was abolished in 1992 due to its unpopularity and reduced collection of rates. It was replaced with a tax on residential property or the Council tax. The tax was based on the capital value of the property with the market value as at 1st April 1991 (Enid, 2014).

The valuation for all properties is centralized and is done by the Valuation Office Agency. Under the County tax, there is no valuation of an individual residential property, but the value is based on various capital value bands. Davis *et al*. (2004, p. 51) describes capital value banding as a system that relies on the "concept of dividing properties into different categories according to an estimate of their capital value for the purposes of determining a property tax bill. Rather than valuing the properties to a discrete figure and assigning them to a band, the property values are estimated according to a range of values or bands"

The banding system is simple and requires less accuracy in the valuation process. The properties are placed in wide value ranges as shown in Table 2-7 below. This reduces the tendency to treat a household unfairly if there is a slight increase in the value. Change from one value range to another can only occurs where a neighbourhood deteriorates and all the properties in the area are moved to a lower value range. If a house is expanded and increases in value, re-branding is only done on sale of the house, but if it is demolished, rebranding is immediate (Enid, 2004). For the non-residential properties, revaluation is done after every five years except in 2015 which was postponed to 2017 (Enid, 2014). This tax is a Central Government tax in the UK.

Table 2-7: Valuation Bands in the United Kingdom

Range of values				
Valuation band	**Scotland (£)**	**England (£)**	**Wales (£)**	**Proportion of Band D bill payable**
A	Up to 27,000	Up to 40,000	Up to 30,000	6/9
B	27,001-35,000	40,001-52,000	30,001-39,000	7/9
C	35,001-45,000	52,001-68,000	39,001-51,000	8/9
D	45,001-58,000	68,001-88,000	51,001-66,000	9/9
E	58,001-80,000	88,001-120,000	66,001-90,000	11/9
F	80,000-106,000	120,001-160,000	90,001-120,000	13/9
G	106,001-212,000	160,001-320,000	120,001-240,000	15/9
H	0ver 212,000	Over 320,000	0ver 240,000	18/9

Adapted from Davis *et al*. (2004, p. 53)

Currently, residential and non-residential properties are treated differently for local taxation purposes. For residential properties, the valuation has been capped or frozen as at 1991 while for non-residential properties, revaluation is done every after five years.

2.9.2. Property taxation in South Africa

In South Africa, the Local Government Municipal Property Rates Act, 2004 (R.S.A. 2004) regulates the taxation of property by the local governments. Property is defined as immovable property and includes a registered sectional property; a right registered against immovable property excluding a mortgage bond and a land tenure right**.** A municipality is required to levy rates on all properties within its jurisdiction except for properties owned by the municipality; public infrastructure properties owned by the municipality, and properties where the market value cannot be established due to insecure tenure.

A municipality can give exemptions, rebates, and reductions to some specific category of property owners based on some criteria. The law requires the municipal manager to annually table before the municipal council the list of all exemptions, rebates and reductions granted in the previous financial year including a statement of account of the income the municipality has foregone from the exemptions, rebates, and reductions. All

the exemptions, rebates and reductions are supposed to be reflected in the annual budget of the municipality.

The category of property owners that may be given exemptions, rebates and deductions include owners of property who are; -indigenous; dependent on pensions or social grants for their livelihood; temporarily without income; owners of property situated within an area affected by a disaster or any other serious adverse social or economic conditions: residential properties with a market value lower than an amount set by the municipality; agricultural properties under farming. Where a category of residential property is given a rebate or a reduction, rates are not levied on the first R15, 000 of the market value of the property as assigned in the valuation roll. Properties that are excluded from rating include 30% of the market value of public service infrastructure; any part the of the seashore; territorial waters; islands owned by the state; nature reserves such as national parks; mineral rights; land reform beneficiary (but the exemption lapses after ten years of registration of the title) and property used for public worship.

In the City of Johannesburg exemptions, tax reductions and rebates are provided for in the rates policy and are for specified property ownership and use (City of Johannesburg, 2017). For residential property, the City does not levy rates on the first R200, 000 of the market value in the valuation roll. It also states clearly who qualifies for tax exemptions and the criteria for applying for the exemptions or tax rebate. Exemption is given to people whose income is below the minimum set by the council.

The valuation of the properties can either be done by the municipal Valuer or contracted out to private Valuers. Market value of the property is defined as ‘the amount the property would have realised if sold on the date of valuation in the open market by a willing seller to a willing buyer.’ For sectional properties, the market value of each individual unit is determined.

According to the law, physical inspection of the property is optional. The Valuer can use comparative analysis and other computer aided mass appraisal systems to arrive at the value of the properties. The valuation techniques should keep abreast with changes in technology. Where market comparable data is not available other approved method of

valuation may be used to arrive at the property value. A local authority is required for annually update the valuation roll by preparing a supplementary valuation roll and amending the main valuation roll. An objection on the valuation roll must be regarding a particular property and not against the roll.

The law provides for partnership between municipalities in having one Valuer to come up with a valuation roll and to share the costs of the valuation**.**

On access to information, a local authority Valuer may request for access to information or documents from the property owner, his agent, tenant, or occupier of the property which in the Valuer's opinion would assist in coming up with the value of the property. The Valuer can also make a request in writing or orally for details that are required in the valuation process.

The law provides for monitoring of the local property taxation under the provincial and national levels. Under the provincial level, the member of the executive council who is responsible to the minister for local government is required to ensure that the municipality complies with the provisions of the Act.

At the national level; *'*The Minister may monitor, and from time to time investigate and issue a public report on the effectiveness, consistency, uniformity and application of municipal valuations for rates purposes. The investigation may include-

i. Studies of the ratio of valuations to sale prices; and
ii. Other appropriate statistical measures to establish the accuracy of the valuations, including the relative treatment of higher value and lower value property.*'*

2.9.3. Property taxation in The United States

The USA has a federal system of government with Federal, State and Local Levels of Government where the later vary from large Counties and Cities to small Towns and special Districts (Hyman, 2011). The property tax is an old tax which is hated and considered unfair and an intrusion into private property (Ulbritch, 2011). It is a major source of local government revenue with and in the fiscal year 2008-2009 collection was 410 billion which formed 72% of local government revenue and 28% of general revenue

(Ulbritch, 2011). The property tax base is on real estate which includes land and improvements. All properties are taxable except the legally exempt properties.

The administration of the property tax falls under the local governments and vary from one local government to another (Hyman, 2011). The state governments are however involved in setting the rules and in administration of the property tax (Ulbrich, 2011).

Ulbrich (2011) and CCH (2009) note that in most states the local government is responsible for property assessment but in some states, the state is involved in the assessment of property owned by public utilities, mining and natural resources. The assessment can either be done by an elected assessor or an appointed official. The role of the assessor is to identify and make an inventory of all the assessable property within a jurisdiction, assess the property and include them in assessment roll (CCH, 2009). To carry out these functions in a timely and accurate manner, the assessor should have up to date property records.

Assessment is supposed to be done annually and depending on a state, the process of value determination starts nine to eighteen months before billing is done (CCH, 2009). Ulbrich, 2011 however notes that due to the cost of reassessment, this is not done annually but takes three to seven years.

Assessment is at market value of the property and states use different rates of the market value as the tax base. Some use full market value where the tax is assessed at 100% of the market value while other have classified rates for different property uses.

On completion of the assessment roll, it is subject to review by local, regional, or state body known as a board of equalization or board of review (CCH, 2009). The body is responsible of 'raising or lowering any incorrect valuations, adding any property to the roll that the assessor may have improperly or inadvently omitted' (CCH, 2009). The board has the supervisory role of regulating and monitoring local assessment practices, hears appeals to the valuation and advice on local tax issues. Once the valuation roll is certified, it is adopted by the taxing authority for levying of property taxes.

The property tax in USA has faced problems. This is mainly due to rapid increase in property values that result in annual increase in the tax burden. In some states, the property

values increase at rates higher than the rate of inflation. For retired citizens and those with fixed incomes, the property tax becomes a real burden. Due to these challenges there were revolts against the property tax in the 1970s and 1980s (Brunori *et al*. 2006). This resulted to changes in ways that local governments raise revenue and "---signalled the beginning of a new and decidedly anti-tax political philosophy that continues to this day" (Brunori *et al*. 2006, p. 22).

Brunori *et al*. (2006) and Rosengard (2012) note that the revolt against property tax in California resulted from increased property values which were at 25% per year before proposition 13; and the local government not providing tax relief. There was also the issue of financing schools through property tax which the California Supreme Court ruled illegal in 1972. The revolt resulted in passing Proposition 13 in 1978 which was incorporated in the constitution of the State of California. Proposition 13 reduced and limited the property tax and set the assessment date as at 1976 level, and in addition limited increase in assessment value to 2% per year but only on properties which have sold; limited the tax rate and set a requirement that all local properties must be approved by the electorate. Other states also adapted limits to property tax and in 1978 Idaho approved a 1% limit on property tax rate and an annual limit of 2% of increase in assessment.

In Massachusetts Proposition 2½ of 1980 put a cap on the revenue the local government could raise from property tax to 2.5% of the assessed value and additionally limited the annual increase of property tax revenue to 2.5%.

According to Brunori *et al*. (2006) and CCU (2009) property tax limitations include circuit breakers which are targeted relief programmes for low and middle-income property owners where they are given state grants once the property tax burden reaches a certain percentage of their income. These include abatements, credits, limits on property tax rates and assessment caps. The benefit is mainly given based on ownership such as non-profit and charities, the elderly and disabled but depends also on the use of the particular property. Property tax exemptions are given subject to federal law and state constitution. Most states give exemptions or special tax treatments for land used for purposes such as agriculture, manufacturing, energy conservation, pollution control. The beneficially is however required to do an annual filling prior to the assessment date specified for a local authority.

In conclusion local property taxation system in UK is not equitable because the assessment date has been frozen to 1996 values. USA and South Africa have more robust system of taxation where the tax base includes both land and improvements and there are regular revaluations to ensure that increases in value are captured in the tax base.

2.9.4. Property taxation in Kenya

Local Government property taxation in Kenya is commonly known as land rating and is a statutory tax that is regulated by legislation. It is one of the own source revenues that is assigned to County governments through the Constitution. The main laws that govern the taxation are the Rating Act and the Valuation for Rating Act.

In 2010, Kenya adapted a new Constitution to promote good governance and economic development by decentralising some of the functions of the central government to the local or county levels. This involves devolution which is the transfer of functions, powers and resources to local levels which assume full responsibility and accountability (Mboga, 2009). The decentralisation process was realised after the 2013 general election with the election of County Governors as the Chief executives of the County Governments.

Chapter 11 of the Constitution of Kenya 2010 provides for devolution of government (Kenya Law Reports, 2010). The objectives of devolution are stated as to promote social and economic development; equitable sharing of national and local resources; to facilitate decentralisation of state organs together with their functions and services. This will result to autonomous devolved local governments, which should be able to operate independently with little assistance from the central government and with autonomous decision making and corresponding fiscal financial autonomy.

The chapter also establishes county governments. One of their principles is that they shall have reliable sources of revenue to carry out the roles of governance and service delivery. The fourth schedule sets out the functions and powers of the county governments under the following areas; improving agriculture; provision of county health services; control of air, noise, and other forms of pollution; provision of public entertainment and amenities; provision of county transport including roads, street lighting, traffic, and parking; ferries and harbours; trade development; fire-fighting.

Service delivery is a major function of the county governments, which is enshrined in the constitution. To carry out all these functions, the county governments therefore require adequate revenue sources. The county residents have a right to demand that the services are provided. However, this is a major challenge to the county governments which are currently unable to generate sufficient revenues of their own. The Commission for Revenue Allocation (CRA) has noted that most County governments in Kenya have inadequate revenue sources and are currently indebted. The County governments therefore need to re-evaluate their revenue sources with a view to improve revenue generation and collection.

County governments are covered under Chapter 11 of the Constitution of Kenya on devolved government. One of the objects of devolution is to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya. The CGs are supposed to have reliable sources of revenue to enable them to govern and deliver services effectively.

Chapter 12 guides all aspects of public finance including the CGs. On the issue of equity, the constitution mandates the public finance system to promote an equitable society. This is through ensuring that the burden of taxation is shared fairly. This calls for the tax system that ensures equity in taxation but does not define what constitutes equity.

Unimproved site value or land value taxation was introduced in Kenya in 1901. According to McCluskey and Franzsen, (2001) unimproved site value rating was introduced in Kenya for the following reasons: -

- To encourage land development and development for small rural towns.
- To discourage speculative holding of land especially by absentee property owners.
- It was easy to implement especially since there were few personnel especially Valuers.
- When the rating system was introduced, it was working in other countries such as South Africa, Australia, and New Zealand. Now most of these countries have changed to property value taxation

McCluskey (2007) notes that there has been a change towards abandonment of pure land value taxation. This has happened in South Africa, New Zealand and Australia. Kenya is

the only country in the world that currently uses pure site value taxation. South Africa recently adapted capital value taxation which was introduced in 2011. Dye and England (2011) highlight the main objectives of the shift from land value to capital value taxation as a political desire to tax wealth and improvements; to have more uniformity in policies and lack of credible sales data on vacant land in urban areas. The contribution of property taxes to government revenue has stagnated even at the national level.

Table 2-8: Tax collection by tax regime in Kenya

	2008/2009 Kshs.billions	**2009/20010 Kshs.billions**	**2010/2011 Kshs.billions**	**2011/2012 Kshs.billions**
Taxes on income, profits	194.2	219.5	261.8	306.9
Taxes of property	0.3	0.3	0.3	0.4
Value added tax (VAT)	126.9	142.0	174.4	205.3
Taxes on other goods and services	93.1	99.3	108.6	120.1
Excise taxes	69.9	74.1	83.8	93.3
Custom duties	36.2	57.2	67.1	79.1
Non-tax revenue	36.2	19.3	24.6	35.7

Source: Adapted from KNBS (2012)

The table indicates that revenue from property taxes at the national level stagnated between the financial years 2008/09 to 2010/11 and had a slight increase of 0.1 billion in the 2011/12. This contrasts with income tax that increased by 112.7 billion, a 58% increase in the same period. Property taxes also have the lowest contribution among all the other revenue sources. In the U.S., U.K. and Korea, property taxation contributed to about 11% of the Government tax revenue in 2007 (OECD, 2010). This shows that in Kenya, property taxation is an underutilized source of government revenue.

At the local government level, Kelly (2003) notes that rates have been declining as a percentage of local government revenue in Kenya. They declined in 1990/91 from 26% to 22% in 1993/94 and by 20% in 2000/01.

As shown in Table 2-9 below, 29 of the 47 County governments in Kenya have expired valuation rolls. Most local governments are composed of more than one defunct local authority which operated independently. Where land rating was based on site value rating, they each had their valuation roll. With devolution, the County governments have not harmonised the rating processes to have a uniform rating system. Even under area rating the rates charged are different. There is therefore inequity in property taxation due to lack of harmonised rating system within the counties.

Table 2-9: Status of County Government's valuation rolls and rating legislation

County government	**Form of rating used**	**Validity of valuation roll(s)**
Baringo, Bomet, Bungoma, Busia Home Bay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Mandera, Marsabit, Migori, Mombasa, Muranga, Nakuru, Nandi, Narok, Samburu, Siaya, Tana River, Trans Nzoia, Turkana, Uasin Gishu, Vihiga, Wajir, West Pokot,	USV	Expired
Elgeyo Marakwet	USV	All valuation rolls have expired except Iten-Tambach, which expires in 2023
Kilifi	USV	Expired except Town Council of Kilifi, expires in 2020
Meru	USV	All valuation rolls have expired except Meru and Maua Municipal Councils, expires in 2020 and 2021
Nyeri	USV	expired except Nyeri Municipal Council, expires in 2022
Taita Taveta	USV	Expired except Taveta Town Council expires in 2019
Machakos. Embu, Tharaka Nithi	USV and flat area rate	Expired
Garissa, Nyamira, Nyandarua, Makueni	Flat area rates	No valuation roll

Source: Compiled from Republic of Kenya (2017, pp. 54-55).

Notes

- This table reflects status based on information available as at May 2017
- The valuation rolls inherited from the defunct LAs expiry dates vary widely, with the oldest having expired in 1990. In cases where flat rates are applied, they are still valid and only subject to assessment in variation rates

In Kenya, some County governments are still solely relying on area rating for land rating as indicated in Table 2-9. They include Garissa, Makueni, Nyamira and Nyandarua. Others rely on a mixture of site value and area rating including Kiambu and Nairobi City.

2.10. Summary of processes of property taxation that enhance equity

This summary is derived from the discussions in this chapter on literature review and from the best practices in the world and will form the basis of assessment of equity in property taxation in Nairobi City.

Table 2-10: Property tax processes and best practices that enhance equity in property taxation

Process	**Best practices**
Property tax base	Market value of the property which can either be derived from capital value or the rental value of the property
Property tax base coverage	-All properties should be included in the tax register except the legally exempt properties. -Properties that have informal ownership documents should also be included in the tax register for taxation purpose. -The aim should be to have 100% coverage
Exemptions	Should be minimum and legal. The basis of exemption clearly spelt to avoid ambiguity and abuse
Basis of valuation of the tax base	Market value of the property
Valuation cycles	Maximum of 5 years for revaluation
Equity in property taxation	There should be horizontal and vertical equity in property taxation
Methods of valuation	Computer assisted mass appraisal not parcel based valuations
Monitoring and Evaluation	- There should be an independent body that monitors the property taxation processes to ensure that there is equity in taxation - The law should provide for uniformity in the valuation process to ensure equity.

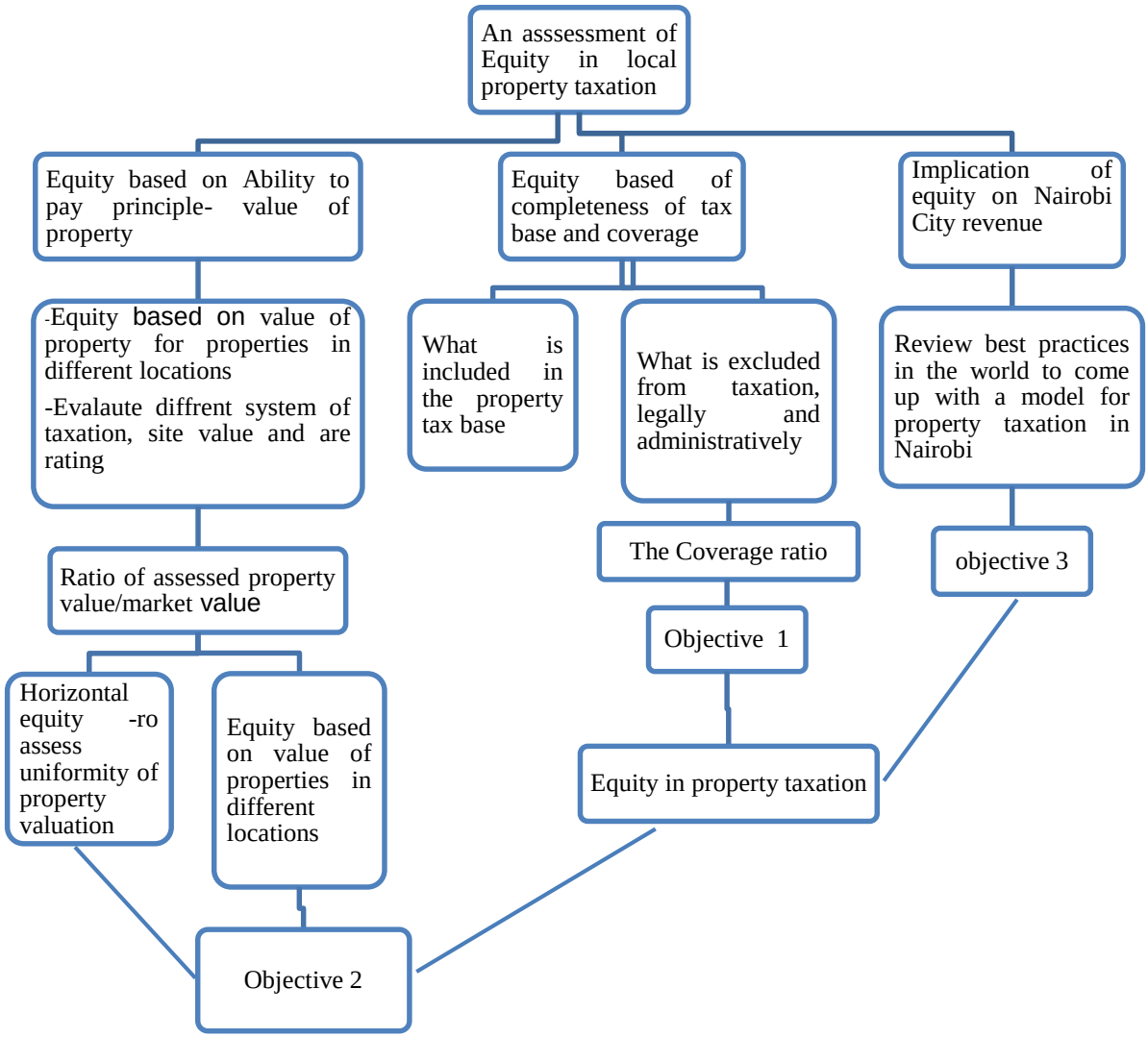
Source: Author's (2018) construct from review of literature on best practices in the world

From the discussions in this chapter, it can be noted that most countries use a form of improvement rating either capital value or rental value. Kenya is the only one that uses a purely site value as the basis of local property taxation. Singapore and Hong Kong have a property taxation system based on rental value because their rental market is vibrant while Egypt replaced a tax system that relied on three systems of taxation in 2008 and adopted an annual rent-based system (Franzen and McCluskey, 2013).

2.11. Conceptual framework for the research

The conceptual framework in Figure 2-3 was formulated from the literature review and was used for assess equity in property taxation in Nairobi city.

Figure 2-3: Conceptual framework for the research



Source: Author's Construct (2018)

CHAPTER 3 : RESEARCH DESIGN AND METHODOLOGY

This Chapter gives the plan or blueprint of the techniques that the researcher used to collect, analyse, and interpret data to achieve the set research objectives (Bhattacherjee, 2012; Nachmias and Nachmias, 1996). The methods used in the research are derived from the conceptual framework in Chapters Two that was formulated from literature review. An overview of Nairobi City which is the case study area is provided.

3.1. The Research strategy- Case study approach

The case study approach is ideal in studies where "the researcher has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" Yin (1984). It deals with the 'how' and 'why' questions. The aim was to establish the relationship between equity and local property taxation in Nairobi. The phenomenon of the study was property taxation in Nairobi City by the local government under Nairobi City. This phenomenon was observed as it was practised without being manipulated (Yin, 1984; Bhattacherjee, 2012). Therefore, case study approach was best suited for this research.

The research relied on multiple cases in Nairobi comprising of residential areas within the City. The areas were selected based on income classification as per the Urban Consumer Price Index in Kenya (KNBS, 2010). The classification provided for various categories as follows: -

- Upper-income groups - Household spending above Kshs. 120,000 per month in October 2005.
- Middle-income groups- Household spending between kshs. 23,671 and up to and including Kshs. 120,000 per month in October,2005
- Lower income groups- household spending Kshs. 23,671 or less per month in October 2005.

The research also relied on the survey method to collect data on the whether the sampled properties were vacant or developed and how many residential units were on the plots. Field survey was used to collect data from the field on the sampled area. Key informants Interviews were used to get information on property tax administration in Nairobi City.

3.1.1. An overview of Nairobi City

Nairobi owes its origin to the construction of Kenya- Uganda railway and was started as a construction depot. It was gazetted as a township in April 1900 with an area of 18 Km^2 and had an area of 684 Km^2 by the time of independence in 1963 (Oyugi and K'akumu, 2007).

Nairobi is the administrative and commercial capital of Kenya. It is also a regional and international hub. It is the headquarters of major multinational companies, foreign embassies and United Nations bodies. NCC is one of the forty-seven County Governments in Kenya that resulted with the devolved governments after the enactment of the Constitution of Kenya 2010.

3.1.2. Urbanisation in Nairobi City

According to Michael *et al*. (2009), urbanisation is part and parcel of growth. No country has ever reached middle income status without large numbers of its population moving into the cities. Urbanisation and city growth emanate from factors with the main ones including: -rural-urban migration; natural population increase and physical expansion of urban areas into rural areas through conversion of agricultural land into urban settlements (Cohen, 2006). The city of Nairobi has continued to experience rapid growth in the form of population, urbanisation, and the physical extent.

The rate of population growth in Nairobi is at a rate that is not commensurate with income-generating opportunities and infrastructure provision (Oyugi and K'akumu, 2007).

Table 3-1: Population and size of Nairobi, 1906 to 1999

Year	Area	population
1906	1813 Ha	11,000
1948	78 Km^2	118,976
1963	684 Km^2	270,000
1999	5179 Km^2	2,143,254

Source: Adapted from (Oyugi and K'akumu, 2007).

Nairobi has experienced rapid urbanisation due to increased population and increase in physical extent. The population of Nairobi was 2,025,724 in 1999 and grew by about 55% in ten years to 3,138,369 in 2009 and is projected to reach 5.05 million by 2022 (ROK,

2002 and KNBS, 2017, ROK, 2008). This has put a strain on the infrastructure services in the city including roads, housing and water and sewerage services.

Nairobi covers about 0.1% of the total surface area of Kenya but has about 8% of Kenya's total population and 25 per cent of Kenya's urban population (UN-Habitat 2001). As the City has continued to grow, so has there been increased pressure on the existing urban services. Urban service provision has not grown in tandem with the economic, physical, and social growth of Nairobi. The revenue generate by the local government has been inadequate to meet the growing demand for urban services. The financial capability of Nairobi is limited due to poor resource management and weak revenue collection system (UN Habitat, 2006).

3.1.3. Land uses in Nairobi City

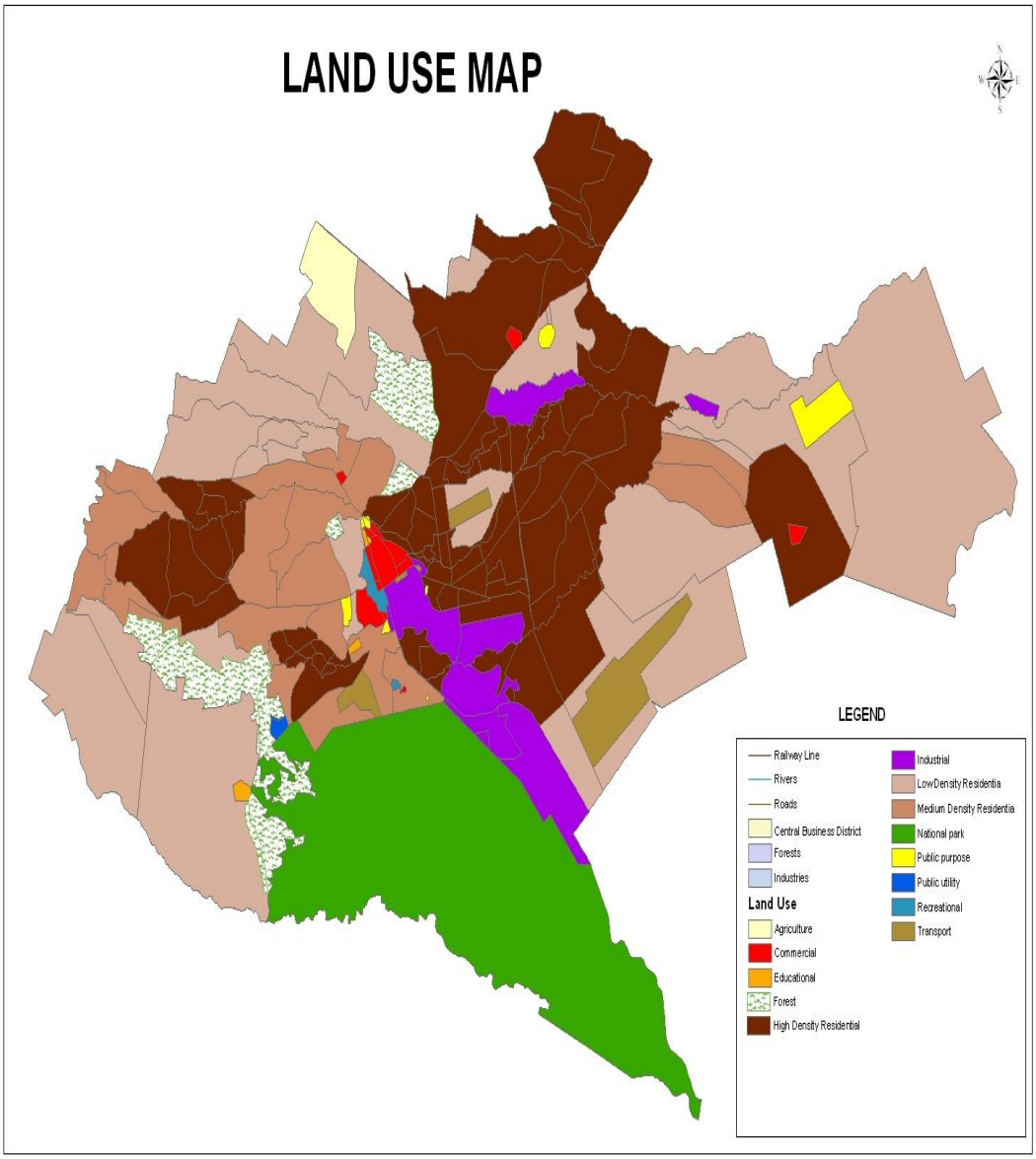
Table 3-2: Land use types by area and percentage cover, Nairobi city

Land use type	**Area (Km2)**	**Cover (per cent)**
Residential areas	175.6	25.22
Industrial/ commercial/ service centres	31.8	4.57
Infrastructure	15.9	2.28
Recreation	12	1.72
Water bodies and riverine areas	11.8	1.69
Urban agriculture	96.8	13.9
Open lands	198.8	28.55
Others (including protected areas)	153.6	22.06
Total	**696.3**	**100**

Source: Adapted from Nairobi City County (2014, p. 20)

Open land and other land including protected area form a large percentage of the land at 28.55 % and 22.06 % respectively. Residential land use is also predominant accounting for 25.2% of the total area.

Map 3- 1: Land use in Nairobi City



Source: Ministry of Land and Physical planning (2007)

3.1.4. The Real Estate Market in Nairobi City

Plate 3-1: Aerial Photograph of Nairobi City

Source: http://www.100resilientcities.org/cities/nairobi/ accessed on 7/12/2017

Kenya has experienced growth in the construction industry. The KNBS (2012) indicates that the building and construction sector grew by 4.3% and 4.5% in 2010 and 2011 respectively. The value of loans and advances to this sector also grew from 32.6% in 2010 to 50.8% in 2011, an increase of 18.2%. Most of the property development is concentrated in Nairobi, which is the Capital City of Kenya.

Data from NCC, Urban Planning Department indicate that in 2014, the County approved building plans worth Kshs. 228 billion. There was an increase of about six percent in 2015 to about Kshs. 242.13 billion. In 2016, the County approved a proposed Shopping Mall, Crossroad Mall with an estimated value of Kshs. 3 billion.

The real estate sector in Nairobi has experienced phenomenal growth since 2002 **(**Africa Business Magazine, 2012**).** Knight Frank Africa Report (2012) ranked Nairobi as Africa's highest growth market for investors in high-end property development. (Business Daily Africa, 1st October 2012) The report further indicated that between June 2011 and June 2012, this segment of the property market recorded a 21.8% growth in prices, which was the highest in Africa. Nairobi has continued to attract major investors in the real estate sector. Some of the reasons for the increase in real estate investment include improved infrastructure in terms of roads, access to utilities, communication, and financial services; enabling political and economic environment. Despite the post-election violence of 2007-2008, Kenya recovered and has experienced a stable political environment. The development of major road which include Thika Super Highway, Southern, Northern and Eastern By-passes has increased accessibility to the County leading to increased demand for properties within these areas.

The introduction of Real Estate Investment Trusts (REITS) in Kenya in 2013 was a boost to the real estate sector. A REIT is an investment in real estate that trades in the stock exchange and allows both small and large investor to own a stake in real estate investments (investpodia.com). In Kenya REITS are regulated by the Capital Markets Authority through the Capital Markets, Real Estate Investment Trusts (Collective investment Scheme) 2013.

There is destination marketing of Kenya as a place of "dreams and romance." This has resulted to increased demand for real estate especially residential property with corresponding increase in prices. The demand is both local, from foreign expatriates living in Nairobi and from Kenyans living in the diaspora.

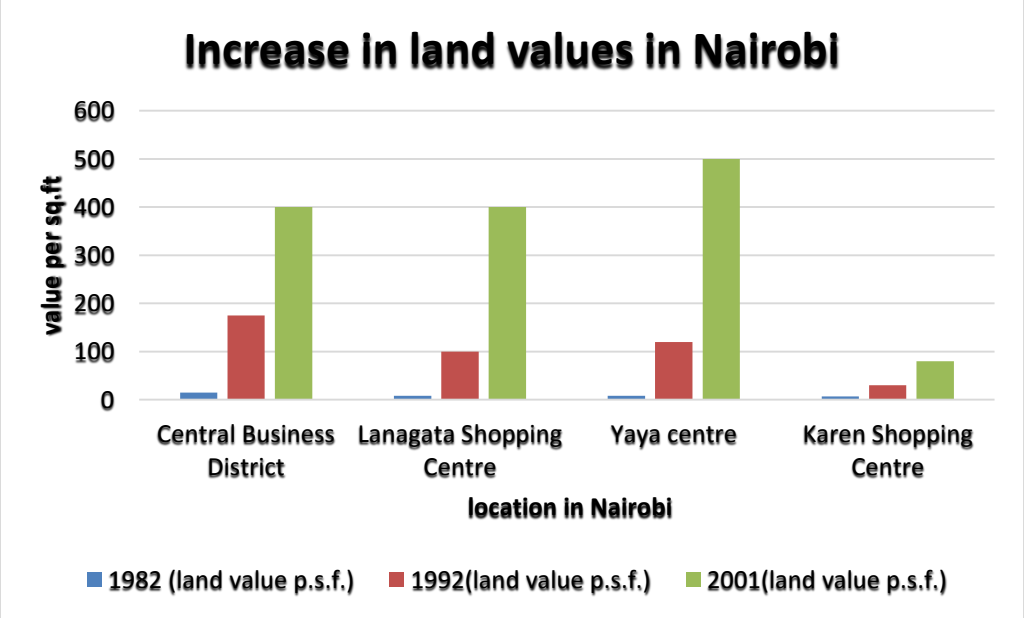
Property values in Nairobi have been increasing at a tremendous rate. The land values in Langata Shopping Centre increased by about 6150 % from 1982 to 2002.

Table 3-3: Land values in some selected areas in Nairobi

Location	1982 (land value p.s.f.)	1992 (Land value p.s.f.)	2001 (land value p.s.f.)	Percentage increase 1982-2002
Central Business District	15	175	400	2566
Langata Shopping Centre	8	100	400	6150
Yaya centre	8	120	500	4900
Karen Shopping Centre	7	30	80	1042

Source: Adapted from Nzau (2003)

Plate 3-2: Increase in land values in Nairobi



Source: Author construct from Table 3-3 above

Nairobi follows South Africa in having the highest number of modern retail floor space in Sub-Sahara Africa Knight Frank Africa (2017). Some of the modern shopping malls which have opened in the city in the recent past include Garden City Mall, on Thika Road which has 33,500 sq. metres and opened in 2015; The Hub, in Karen with 30,000 sq. metres and opened in 2016; Two Rivers Mall, 67,000 sq. m and opened in 2017. There has been development in high end residential apartments and houses in such areas as Kilimani, Lavington, Runda, Karen and Thigiri Ridge. The major residential developments include Runda Park in Runda Estate which was developed by Kenya Power Pension Fund in 2012. There are 39 town houses on half and acre plot which were selling at about Ksh.80, 000,000 in 2017.

The increase in land development is mainly because of decisions made by the L.G. such as change of user, improved service provision in the form of road network upgrade and sewer provision. These activities are because of capital expenditure by either the Central Government or the local government. The L.G. can use the revenue generated to open other areas for development. Nairobi has not been investing in housing for the urban poor. This has resulted in major inequalities in the City.

3.1.5. Challenges of urbanisation in Nairobi City

The City of Nairobi, just like other cities in the developing world faces challenges in provision of urban infrastructure and services due to rapid urbanisation. These include inadequate housing, water supply, poor road network, sanitation, and solid waste management.

The increased population growth coupled with rise in real estate development has put a strain on the infrastructure services in the city. Most of the major road networks are single lanes which have not coped with the increased traffic. Some roads such as Ngong road, Outering Road, Langata road and Ring road Kilimani have been widened to reduce traffic congestion.

Adequate provision of infrastructure is an indicator of efficiently managed cities. (Asoka *et al*. 2013). Nairobi has a challenge of adequate water provision leading to unreliable water supply and frequent water rationing especially in the dry seasons. The current water

production by NCWSC is 500,000 cubic metres per day against a demand of 690,000 cubic metres per day. NCWSC is therefore not able to meet about 28% of the city's water demand. Most residents in upper and high-income neighbourhoods can supplement the water supply through boreholes and rain water harvesting. However, residents in low income neighbourhoods are not able to incur the high costs in drilling of boreholes. Water is a basic human right as per the Constitution of Kenya and therefore all city residents should have access to reliable and affordable water supply. Only 22% of slum households have connection to piped water and 75% of household in informal settlements rely on water from vendors (Un-Habitat, 2016) The water is sold to them at rates high than those in the high and middle-income areas. Some residents in informal settlements also rely on water from shallow wells which is prone to contamination and is a health hazard.

Nairobi also faces a challenge of housing mainly due to high rates of urban growth; a lag in the development of the urban infrastructure that supports housing development; the low purchasing power of most urban households; and a lack of appropriate building standards owing to restrictive building by-laws. There is limited supply of land with urban services such as water, roads, sewerage system, street lighting resulting to proliferation of informal settlements in areas such as Githurai, Embakasi and Dagoretti.

The City relies on open dumps for disposal of solid waste. Increased urbanisation has resulted in generation of large amounts of garbage that the City has not been able to cope with. The garbage dump poses a health risk to the residents of the low-income neighbourhoods of Dandora where it is located. The land fill is also a threat to the ground water supply as there is a risk of contaminants leaching to the ground water.

Inadequate provision of urban infrastructure has resulted in increased levels of poverty which had risen from 26% in 1992 to 50% in 1997 (Un-Habitat, 2006). The rising levels of poverty is manifest in the expanding slum and informal settlements, rising levels of crime due to increased unemployment especially for the youth and increase in street children and families.

The aim of devolution was to empower the County governments to make decisions that improve the lives of their residents. To combat these challenges, the city should strengthen

its revenue mobilisation capacity (Un-Habitat, 2006). This will make it a globally competitive city as it also improves the living conditions for the residents.

3.1.6. Urban Finance- framework for Nairobi City

Devolution is a form of decentralisation and involves transfer of political and financial power from higher levels of Government to lower levels.

"There has been a practice of heavy reliance on external funding or transfer of central government grants for the city's projects with limited or ineffective cost recovery mechanisms demanding that the rich and the poor be treated equally. This has a negative impact on the external linkage triangle of efficiency, effectiveness and sustainability in the provision of urban infrastructure" Oyugi and K'akumu (2007).

Nairobi City require finance to carry out their role of service provision. NCC faces some challenges due to rapid urbanisation. The city has not been able to provide adequate housing for its growing population. This has resulted to about 60% of the population living in slums (UN-Habitat 2006). There is inadequate provision of urban land served is the necessary infrastructure such as piped water, road network, sewerage system (Oyugi and K'Akumu 2007). The available serviced land is sold at very high prices which are beyond the reach of most residents. Most of the residents occupy informal settlements that have inadequate services and is located further away from the city centre.

In 2010, Kenya adapted a new Constitution to promote good governance and economic development by decentralising some of the functions of the central government to the local or county levels. This involves devolution which is the transfer of functions, powers and resources to local levels which assume full responsibility and accountability (Mboga, 2009). The decentralisation political process was realised after the 2013 general election with the election of County Governors as the Chief executives of the County Governments.

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with little assistance from the central Government and with autonomous decision making and corresponding fiscal financial autonomy.

The Chapter also establishes County Governments. One of their principles is that they shall have reliable sources of revenue to carry out the roles of governance and service delivery.

The fourth schedule of the Constitution sets out the functions and powers of the County Governments under the following areas: - improving agriculture; provision of county health services; control of air, noise and other forms of pollution; provision of public entertainment and amenities; provision of County transport including roads, street lighting, traffic and parking; Ferries and harbours; trade development; fire-fighting.

Service delivery is a major function of the County Governments, which is enshrined in the constitution. To carry out all these functions, the County Governments therefore require adequate revenue sources.

The county residents have a right to demand that the services are provided. However, this is a major challenge to the county governments which are currently unable to generate enough revenue of their own. The Commission for Revenue Allocation (CRA) has noted that most County governments in Kenya have inadequate revenue sources and are currently indebted. The Counties therefore need to re-evaluate their revenue sources with a view to improve revenue generation and collection.

3.1.7: Property tax regime for Nairobi City.

There are different forms of property taxes in Kenya that are levied at both the national and the local government levels. The existing taxes on property levied by the National Government and are also levied on properties in Nairobi include; - income tax on rental income, stamp duty tax on transfer of property and value added tax on commercial rents with an annual threshold of above Kshs. 500,000.

a. Taxes on rental income

This is covered under the Income Tax Act chapter 470 of the laws of Kenya, which was revised in 2012. The tax is charged on all income derived from property by either resident or non-resident in Kenya. The tax is charged on net income after deducting all expenses.

The Finance Act 2015 introduced a simplified rate for rental income. This is currently at ten percent of the gross rent for residential properties. This rate applies to gross annual rent not exceeding ten million. Other types of properties such as industrial and commercial are taxed on net annual income on a graduated scale as follows: -

First Kshs. 121,968	10%
Next Kshs. 114,912	15%
Next Kshs. 114,912	20%
Next Kshs.114, 912	25%
Over Kshs.466, 704	30%

The tax structure on industrial and commercial properties is progressive with the tax rate increasing with the rental income. Owner occupied properties are exempt from the rental income tax.

Value added tax is charged on commercial rent at 16% of the rent. This excludes residential properties. Owner occupied premises are exempt from the income tax and the value added tax. The practice before 2016 was for the property owners to make the declaration on the tax return and then make tax payments to Kenya Revenue authority.

There are no field visits done by KRA to verify the information provided. However, in 2015 KRA enlisted agents to gather data on rental building owners. The exercise is still on-going and has not captured all the properties in the country. Property owners who are landlords declare the amount they receive. KRA does not have a verification mechanism. Taxes on rental income are therefore prone to risks of under declaration and tax evasion. RA reported in 2017 that it collects about Kshs.400 million per month in rental income which translates to 4.8 billion per annum.

b. Transfer taxes

This is stamp duty tax paid on transfer of property and is levied by the National government. It is covered under the Stamp Duty Act chapter 480 of the laws on Kenya.

The rates of tax are different for both urban and rural land. For urban land, the rate of stamp duty is 4% of the sale price and for agricultural and land outside urban areas the rate of stamp duty is 2%.

The tax is paid at the registration of documents. Where property is owned informally, it can change hands without registration at the Lands Department. In this case no tax is paid to the government. This applies to land allocated by the Local authorities which do not have titles. The LA approves the transfers and change the ownership records that they hold.

Section 117 gives exemption to transfer of property for educational purposes and businesses that fall under the Export Promotion Zones.

c. Capital gains tax

Hyman (2011) defines capital gains as increases in the value of assets/property over an accounting period. Realized capital gains are achieved after the property/asset is sold or exchanged for another, while unrealized capital gain is on property that have not been sold.

Capital gains tax in Kenya had been suspended in 1985. It was reintroduced with effect from 1st January 2015 through the Finance Act, 2014. The tax is at five percent of the gain accruing to a person on transfer of a property located in Kenya.

3.1.8. Land Tenure Systems for Nairobi City

FAO defines land tenure as the relationship between land and people as individuals or groups. It includes the rules that govern the relationship between society and land such as how to allocate property rights, to use, control and transfer.

Before the advent of colonisation in Kenya, land was under communal ownership by the respective communities. 'The advent of colonialism witnessed the introduction, by the colonialists, of western laws and ideology in the country's land tenure regime; thereby dramatically and radically changing the entire then existing traditional land tenure systems' (Sifuna, 2009, p. 43).

Land registration is under the National Government and is currently under the Ministry of Land and Urban Development. Siriba and Mwenda, (2013) note that there are two systems of title registration in Kenya; - the deed system and the title system.

Registration of title to land involves identifying the land parcel on the map and then registering the rights to the land and the ownership details (UN, 1996). Where the transfer is for the whole parcel of land, only the ownership details will be changed. However, in case of sub-division of the land and part of the land is transferred, the survey map will have to be amended and new title documents issues.

In registration of deeds a copy of the transaction document is deposited in the land registry where the land is given a reference number, with the entry recorded in the register (Siriba and Mwenda, 2013; UN, 1996). One copy of the deed which is either a grant or a certificate of title is retained at the land registry while the other one is given to the owner. In Kenya, the deeds system was carried out under the repealed Registration of Titles Act.

Land ownership in Kenya falls into three categories namely; public ownership, private ownership and communal ownership (Sifuna, 2009). Public land is land held by the state or land which no individual or community has any claim on. The Constitution vests public land on the respective County Government, which holds it in trust for the residents of the County. The National Land Commission is the administrator of the County land.

Community land is land held by the Community. Where the Community land is unregistered, it is held in trust by the County Government on behalf of the Community. Private land comprises land held under freehold interest, leasehold interest or land declared private land under any legislation. This is provided for in Section 5 of the Land Act, 2012.

Freehold tenure confers absolute ownership in the registered owner. Leasehold interest confers ownership for a limited or specified period. Non- citizens of Kenya can only hold land under leasehold interest not exceeding ninety-nine years as provided in Article 65(1) of the Kenya Constitution.

There is also a trend where property especially in gated communities and apartments is owned under long-term leases. Owners of freehold and leasehold land give the leases or

sub-lease to buyers on lease period shorter than the main lease. This is done under the LRA 2012 Section 54(5), which allows the Registrar of land to give ownership documents by registering long-term leases and issue certificates of lease on geo-referenced apartments, flats, maisonette, town houses and offices. The Sectional Property Act also provides for division of buildings into units where the owners own it as tenants in common.

The practice of taxing only the land element results in many of the property owners being left out of the tax bracket. This is in view of the increased property development in Nairobi City thus, reducing equity in property taxation.

The Constitution of Kenya puts a lot of emphasis on land and environment by devoting a whole Chapter to it. It states that land "---shall be held, used and managed in a manner that is equitable, efficient, productive and sustainable."

The above form of ownership is the formal property ownership, which is recognised by the state. There is however informal property ownership where informality refers to activities that are carried outside the formal rules and procedures set by the Government (Smolka and De Cesare, 2017). This comprises of land that is not registered under the laid out formal government procedures. In Kenya, the National Land Commission Act, 2012 established the National Land Commission. One of the mandates of the Commission is to ensure that all unregistered land in the Country is registered within 10 years from the commencement of the Act which should have happened by year 2012.

3.1.9. Land information system

In Kenya, the cadastral system is structured in support of land registration and contains information about the parcel measurements and the total area in acres or hectares (Njuki, 2001). There is demand for more information to be included such as land use, land or property value, vegetation, communications, land tenure, and available utilities to facilitate such land-based processes as development control, mortgage processes, environmental assessment, and land taxation.

More than ninety percent of data required for a city's administration has a spatial component (Bishop, *et al*. 2000). This includes data on land parcels, road and infrastructure

networks, utilities and recreational areas. GIS is therefore an important component of urban management.

The land information system in Kenya is not computerised and is paper based. There is an on-going project under the MLPP for digitising of the paper land records. This is being done under National Land Information Management System (NLIMS)**.**

3.2. Research Design

The research adapts descriptive research approach which has the objective of accurately portraying the characteristics of a phenomenon or a situation (Kothari, 2004). The main objective is to describe the current state of affair and where the researcher has no control of the variables. The researcher only reports what is happening or what has happened.

AECT (2001) notes that descriptive studies utilise both quantitative and qualitative methods of research. The studies mainly answer the question "what is" and uses observational and survey methods. Descriptive research analyses data using measures of central tendencies such as mean, median, deviation from the mean and correlation between variables.

In descriptive studies, the researcher must clearly define what he wants to measure and use adequate methods for the measurements. It involves accurately describing a phenomenon and the relationship between variables. The population to be studied must also be clearly defined (Kothari, 2004).

Kothari (2004) gives the following as the steps that are followed in descriptive study design; -

- Formulating the objective of the study
- Designing the methods of data collection
- Selecting the sample
- Collecting the data
- Processing and analysing the data.
- Reporting the findings

This research was therefore a descriptive study which relied on ratio studies. The research relied on case study and survey methods of data collection.

3.3. Study population

The target population for the research was all the residential properties in Nairobi City. A population is defined as a complete set of individuals, objects or cases that have some observable characteristics (Mugenda and Mugenda, 1999). To enhance homogeneity in the study population, the research used only residential properties and excluded properties under other uses such as industrial, commercial, and institutional.

Information of total number of residential properties in Nairobi city was difficult to obtain from the Ministry of Land and Physical Planning (MLPP) and from Nairobi City. To determine the sample size from the target population, the researcher used the sampling method. “Sampling is the statistical process of selecting a subset (called a “sample”) of a population of interest for purposes of making observations and statistical inferences about that population” (Bhattacherjee, 2012, p. 65).

The researcher therefore relied on a formula recommended by Smith (2013), used when the population size in unknown as follows; -

$N = (Z\ score)^2 * StdDev * (1 - StdDev) / (Margin\ of\ error)^2$

Where

N= Sample size

Z=Confidence level= 80%, Z Score= 1.28

StdDev=Standard deviation= .5

Margin of error= Confidence interval= +/- 0.5%

The calculation of the sample size is as follows; -

$(1.28)^2 * .5(.5) / (0.05)^2$

0.4096/0.0025= 163.84 is the sample size which was rounded off to 170 plots.

The researcher used a sample size of 170 plot numbers in three study areas, Buruburu, Kilimani and Riruta. The sample size for Buruburu was 50 plots; Riruta was 50 plots while Kilimani had 70 plots. The challenge of time and cost was a hindrance for the researcher to cover a large population. Selection of the study areas was based on density of development as provided by the Nairobi City development planning provisions and the different forms of land rating. Buruburu and Kilimani areas were under site value rating while Riruta was under area rating. These were used to compare equity between site value rating and area rating.

The land reference numbers in these areas were obtained from MLPP, Survey, Planning and Records office (SPRO) which had catalogues of the land reference numbers per registration sections. A list of the properties was compiled and random sampling done through use of Microsoft excel. Systematic random sampling was used where "every K^{th} case in the population frame is selected for inclusion in the sample" (Mugenda and Mugenda, 1999, p. 46). The land reference numbers of the sampling frames were listed randomly without following any criteria. From this list, a random number, or every fifth land reference number was selected until the sample population size was obtained. The sampling allowed for the generalization of the research results to the property taxation of Nairobi and other urban areas in Kenya.

The researcher endeavoured to have a large sample. A large sample size minimizes sampling error and makes it easier to generalize the research findings. It therefore increases the validity or the research findings (Mugenda and Mugenda, 1999).

3.3.1. Sample areas

The study relied on samples from Buruburu, Kilimani and Dagoretti Riruta areas of Nairobi City. These areas differ according to density of development, service provision and property values.

The land use in Kilimani is mainly residential with pockets of offices and shopping malls. The area was mainly under low-density use but with time, there has been increase in the density of development. This has been as result of increased demand on land due to population increase. Increased accessibility because of government investment in

transportation network, improved service delivery in the form of sewerage and street lighting has also resulted in increase in density. There has also been change of use of land by the local government from single dwelling unit to multiple units and from residential to commercial.

Riruta area was initially mainly agricultural land. It has been converted to residential area due to increased demand of housing caused by population pressures. However, the area has inadequate planning and service provision in the form of road and sewerage network.

Bhattacherjee (2012) notes that the selection of case study site should not be guided by convenience but theoretical underpinnings. The study evaluates whether taxation is commensurate with the benefits received. It therefore relies on three case study areas which are diverse in terms of service provision. Kilimani and Buruburu areas are superior in terms of public services such as roads, sewer drainage network and street lighting. There are also a better planned neighbourhood when compared to Riruta.

Table 3-4: Zone, Size, User and Ground coverage of the study areas

Area	**Zone**	**Minimum plot size (Ha)**	**user**	**Ground coverage**
Buruburu	8	0.05	Residential-maisonettes, bungalows	50
Kilimani	3	0.05 hectares	Residential- apartments allowed where there is sewer	25
Dagoretti Riruta	15	0.1 and 0.05 in townships and where there is sewer	Mixed agricultural and residential use	35

Adapted from Nairobi County (2018)

3.4. Data collection

The collected data included both primary and secondary data and quantitative and qualitative data. The data was collected by documentary search, interview of key informants and field survey of the sampled land reference numbers in the case study areas. This was done in the period between June 2016 and February 2017.

3.4.1. Secondary data

Secondary data refers to data that already exists. The study relied on review of various documents including legislation, statistical data, policy documents and newspapers. The researcher obtained secondary data from document sources in Nairobi City and the Ministry of Lands and Physical Planning. The use of multiple data sources was necessary for triangulation of information to improve validity of the research.

According to Frankfort-Nachmias and Nachmias (1996), secondary data has the following advantages; -

- It is useful in increasing the sample size and its representativeness. This ensures generalisation of the research findings.
- The data is also useful for triangulation purposes, which increases the validity of findings obtained from the primary data.
- It is cheaper to use secondary data compared to primary data, which the researcher gathers on their own.

Challenges of using secondary data include; the problem of accessing the data; the researcher may not have adequate information on how the data was collected; the data may not fit specifically to the research being undertaken. To overcome these challenges, the researcher scrutinized the data and sought clarification from the county and Government departments concerned. The use of information on property registration from the NCC and the MLPP improved the reliability of the data.

The data obtained included; -

3.4.1.1.Land reference numbers for the sample areas from MLPP.

This data was obtained from the Nairobi City and the Ministry of Lands and Physical Planning. MLPP has all records of land ownership in Nairobi and is responsible for registration of ownership documents. The sample land reference numbers for Buruburu, Kilimani and Riruta was first obtained from MLPP and then the details on unimproved site value, area rating and whether the property is in the property register were obtained from

the NCC. The use of these two sources of data increased reliability of the data and consequently the research. The data included the following attributes of the properties: -

Table 3-5: Attributes of sampled land in Kilimani and Buruburu areas

Land/ parcel number	Area/size	Location	Type of development- vacant/developed/ no. of units	USV as assessed by the NCC	market value of vacant site as at December 2016 (EMV)	Ratio: USV/EMV

Source: Author's construct (2018)

The data that was obtained from MLPP including the land reference number is indicated in Appendix B for Buruburu sample, Appendix C for the Kilimani sample and Appendix D for Riruta sample.

3.4.1.2. Property sales data to establish the market value of property.

Data on comparable sales of vacant sites that were recorded from 2015 to 2016 was obtained from the Directorate of Land Valuation, Ministry of Lands, Housing and Urban Development. The Directorate of Land Valuation has records of declared values on property sales which are provided by property owners as declaration for payment of stamp duty tax before approval for property registration is given. Stamp duty valuations are usually carried out on properties before the registration process is completed. The seller is supposed to declare the sale price of the property and the government Valuers carries out a valuation to verify whether the declared value is a fair market value as per the date of sale. There is however under-declaration of property values as the owners try to evade stamp duty tax payment. The valuation by the government Valuers usually is aimed at verifying whether the declared sales values correspond with market values. The research cross checked the declared value against the values adapted by the government Valuers as the market values. Where there was under-declaration, the value as assessed by the government Valuer was adapted. This ensured that the data is credible and reduced the influence of under- declaration.

This information is contained in Appendix E for Buruburu sample, Appendix F for Kilimani sample and Table 5-5 for Riruta sample.

3.4.1.3. Data from City Rating office

The data from Nairobi City included the unimproved site value of the sample properties in Kilimani and Buruburu area. This information was indicated in Appendices B and C. the area rates payable as at 2017 under NCC for the Riruta sample is indicated in Appendix D.

3.4.1.4.The maps of the study areas

The maps were obtained from Survey Department, Ministry of Land and Physical Planning and were used for physical field inspection of sample properties in Kilimani and Buruburu areas.

3.4.2. Primary data collection

The primary data consisted of data gathered by the researcher which was not available elsewhere. The data was obtained through direct observation and focused interview methods of data collection.

Direct observation can be a scientific tool and the method of data collection "when it serves a formulated research purpose, is systematically planned and recorded and is subjected to checks and controls on validity and reliability" (Kothari, 2004, p. 96). The method was chosen for this research due to its advantages which include; - it eliminates bias when it is done objectively; the information gathered depicts what is actually happening; Unlike the questionnaire and interview methods, it does not rely on the willingness of the respondents to respond and is therefore ideal when dealing with subjects that cannot give verbal response such as landed properties (Kothari, 2004).

The method however, has limitations in that it is costly and time consuming; it provides limited information and it can be affected by unforeseen circumstances. Due to these limitations, the researcher selected a sample of 170 properties for the research which allowed for the inspection of the sampled properties. Field inspections were done on the sampled properties in Buruburu and Kilimani areas. The aim was to observe the difference in neighbourhood characteristics in terms of development on the properties.

The inspection of the sampled properties in Kilimani and Buruburu was used to establish the type of development on the property. This was be classified under the following; -

- Vacant/ undeveloped land
- One to five dwelling units
- Five to ten dwelling units
- Ten to fifteen
- Fifteen to twenty
- Above twenty dwelling units

The information on the field inspection is captured in Appendix F which is on data from site inspection of properties in Kilimani area. For Buruburu area, all the sample properties were developed with one residential unit.

Interviews were also used to obtain primary data on property tax administration processes that have an impact on equity with the aim of supplementing the data obtained from documentary sources. Interviews involved the researcher asking the respondent questions in person with an aim of to getting answers about the research hypothesis (Naoum, 1998).

Naoum (1998) notes that interview as a form of data collection technique is mainly used under the following conditions: -

- When the respondents are homogeneous and have similar characteristics.
- The researcher is well informed about the respondent.
- Where interactions are needed to explain and describe how and why certain phenomenon has occurred.
- When a researcher requires more than a yes and no answer.

Key respondent interviews were used to obtain information on property tax administration processes that have an impact on equity. The researcher interviewed key respondents from the Nairobi City, who are involved in the property tax administration, namely valuers in the Directorate of Land Valuation and Property Management.

Frank-Nachmias and Nachmias (1996, p. 234) notes that focused interviews have the key attributes which makes them relevant for gathering data in this research. These include;-

they takes place with respondents known to have been involved in a particular experience; they refer to situations that have been analysed prior to the interview; they proceed based on an interview guide specifying topics related to the research hypothesis; they focus on the subject's experience regarding the situation under study.

The researcher relied on semi-structured questionnaires to guide the interviews. The use of this form of interview is advantageous because it allows the researcher to probe the respondent, ensure clarity in the information, and get adequate information (Frank-Nachmias and Nachmias, 1996).

3.5. Variables in the research

The variables in this research included-

3.5.1. Location

Equity in property taxation was analysed based on different locations of the properties. This includes the planned neighbourhoods of Kilimani and Buruburu and the unplanned neighbourhood of Riruta.

3.5.2. The tax bases

Equity was analysed based on the tax base, whether site value, or area rating. It was also analysed based on the tax burden borne by a property. Effective tax rate which is a factor of property tax base and the tax rate was used for this analysis to compare the areas under area rating and site value rating.

3.5.3. Estimated market value of the property (EMV)

The researcher obtained market value of comparable vacant sites which is the value of the vacant site without improvements. The value of properties in same neighbourhood and in different neighbourhood was analysed. The researcher used comparable sales for the period 2015 to 2016 to arrive at this market value of vacant site as at 2017. The tax paid on these properties was evaluated to establish how tax is related to equity.

3.5.4. Unimproved site value (USV)

The researcher obtained the site value that is currently under use by the Nairobi City for rating purposes for properties under area rating. It is the unimproved site value for Kilimani and Buruburu areas as per the 1982 valuation roll.

3.5.5. Development of the property

Field survey and inspections was done of the sampled properties in Kilimani and Buruburu areas to establish the type of development on the property. The researcher relied on field assistants who visited the site and noted the type of development that were on the plots or whether they were vacant. For the developed properties, the number of units on the property was recorded.

3.5.6. Tax rates

These are the rates that are set by NCC that are multiplied by the assessed site value to arrive at the tax payable. For area rates, the rate is per land size and depends on use of the land. The applicable tax rates as at 2017 for the study areas was used for this research.

3.5.7. Annual tax payable

For the properties under site value rating in Kilimani and Buruburu areas, the annual tax payable is a factor of the unimproved site value as assessed and appearing in the Valuation rolls of the Nairobi City and the tax rate applicable.

For the properties in Riruta area which are under area rating, the annual tax payable is at a flat rate depending on the size of land.

3.6. Reliability and validity of instruments

Reliability is the degree to which a measurement is dependable and is concerned with the consistency of measurements (Adams *et al*. 2007; Bhattacherjee, 2012). The results produced by a reliable measure will not be erratic and unpredictable though they may not necessarily be valid (Adams *et al*. 2007).

To enhance reliability, samples were drawn from various properties groups which varied depending on location, density of development, property values and differences in

neighbourhood characteristics depending on service provision. Large sample sizes of fifty and seventy properties per case study area were used in this research. The use of large sample sizes increases the representativeness of the samples used in the research, thus increasing reliability (Singleton, *et al*. 1993).

Reliability in this study was further enhanced by proper definition of variables to ensure that what is defined is what is measured. The questionnaires and other research instruments used were also clear and precise and did not therefore lead to misrepresentation.

The research relied on triangulation, where multiple sources of data were used (Yin, 1996). Data on the land reference numbers was sourced from the NCC and the MLPP. This increased the reliability and accuracy of the research by ensuring that all the parcel numbers in the study areas had an equal chance of being represented thus reducing research bias.

Validity in research deals with accuracy of measurement and ensuring that the researcher measures what he/she intends to measure (Nachmias and Nachmias, 1996). There are three types of validity in research: - content validity, empirical validity, and construct validity. Content validity ensures that there is congruence between the operational definition and the concept it is supposed to measure (Singleton, *et al*. 1993). This was achieved by the researcher having good definition of the concepts and the operational definitions used in the research and through having a well representative sample.

Empirical validity defines the relationship between the measuring instrument and the measured outcomes. Nachmias and Nachmias (1996) notes that scientists assume that if the measuring instruments are valid, then the outcome of the measurement would also be valid.

Construct validity is concerned with the theoretical underpinnings of the measuring instrument in research to ensure that the research is grounded in theory. This was covered under chapter two where the researcher discussed the theories of equity in property taxation and how equity in evaluated.

3.7. Ethical considerations

The researcher undertook precautions to ensure that the research was approved by the relevant authorities and was carried out in an ethical manner. After the approval of the research proposal by the University, a research permit was obtained from the National Commission for Science, Technology and Innovation (NACOSTI), which is the body, authorised to issue research permits in Kenya. Approvals were also obtained from the various institutions where data was gathered including the Nairobi City, MLPP. The approval letters are attached as appendices M, N, O and P. The researcher also ensured that when carrying out interview, recorded statements were as per what was said by the interviewee.

3.8. Data analysis

The data in this research included both qualitative and quantitative data. The data was analysed using Microsoft excel and Statistical Package for Social Sciences (SPSS).

3.8.1. Evaluation of property tax base and coverage

Under objective one the researcher obtained and analysed both quantitative and qualitative data. The sampled areas were used as the basis of establishing the coverage of property taxation in Nairobi City. The researcher analysed data on properties obtained from MLPP against that obtained from the NCC. The objective was to establish whether the properties in the registers on MLPP are all included for taxation under NCC.

The qualitative data was gathered through key informant interview, review of documents and general observation. It covered themes of property tax base and coverage. Thematic analysis was done of land that is included in property taxation, the land that is legally exempt and land that is omitted from taxation through administrative practices. The exemptions include what is legally allowed and what has been allowed through administrative practice. The sample areas of Buruburu, Kilimani and Riruta was analysed to examine whether all the properties in the sample are included in the tax register. The aim was to show whether the tax base coverage is compressive and whether there are exemptions and omissions of some properties.

The researcher relied on interview of key informant from NCC to obtain data on the following; -

- The total area and number of properties in the valuation roll
- Total area of land that is rateable
- The properties that have not been included in the valuation roll
- The exempted properties
- Measures that the NCC is taking to ensure maximum coverage of property tax.

The research reviewed documents from the NCC, newspapers and other publications from government departments to gather data on this objective.

Comparison with other countries tax system was done to establish the best practices in property taxation.

3.8.2. Extent of equity based on the value of property

To analyse the extent of equity based on the value of the property under objective two, the relationship between the values as assessed by the local government and the market value from comparable sales in this study was analysed by ratios. Assessment ratio was used as of unit analysis. Cornia and Slade, (2005) defines assessment ratio (AR) as the ratio of assessed value (AV) to market value (MV). This was used to analyse whether there is uniformity in the valuation process.

$$AR=AV/MV$$

The median appraisal ratio measures how closely an appraisal is to market value in a jurisdiction (Plummer, 2009). Where the sample properties are appraised at 100% of market value, the median should be 1.0.

Measures of central tendency were used to analyse the distribution of the values. “Central tendency is a measure of a centre of a distribution of values” (Bhattacherjee, 2012, p. 121). The arithmetic mean and median were used as the measures of central tendency. Arithmetic mean is the average of all values in each distribution while the median is the middle value within a range of values in a distribution (Bhattacherjee, 2012).

For mathematical calculations, arithmetic mean was used which represents distributions that are measured on an interval level (Frank-Nachmias and Nachmias, 1996). It considers all the values in distribution, unlike the mode and the median, which considers few values. Extreme values usually affect the arithmetic mean, which makes it a misleading measure of central tendency where there are extreme high and low values (Frank-Nachmias and Nachmias 1996).

The median is less affected by extreme ratios and was therefore used to increase the validity of the research (IAAO, 2013). This was used to show the extent of horizontal equity using different systems of taxation which do not factor in the full value of the property.

Horizontal equity was used to analyse equity for properties in the same neighbourhood. This is a standard measure for equity for comparable properties and exists when the assessment ratio is uniform across properties with similar market values (Cornia and Slade, 2005; Payton, 2006)

The coefficient of dispersion (COD) was used to measure variability or uniformity of the values. It is used to evaluate whether the valuation process arrives at uniform property values for taxation purposes (Carroll and Goodman, 2011; Bell and Bowman, 2002). The ratio of assessed value to the market value is used.

According to IAAO (2013, p. 13), COD "measures the average percentage deviation of the ratios from the median ratio and is calculated by the following steps:

- subtract the median from each ratio
- take the absolute value of the calculated differences
- sum the absolute differences
- divide by the number of ratios to obtain the average absolute deviation
- divide by the median multiply by 100"

Where most properties in a jurisdiction are valued at values close to the market values, the COD is low. However, when there are great disparities between the assessed values and the market values the COD is great.

"A COD of zero indicates perfect horizontal equity with no disparities across properties. Any number above zero is the average percentage difference of all properties' assessment-sales ratios from the median ratio of the study area" Payton (2006, p. 184). This was used to indicate whether there is equity or uniformity in the assessment for taxation purposes for properties that are similarly located.

Bell and Bowman (2002) and Payton (2006) quotes IAAO whose standard on valuation uniformity provides that the COD should not be greater than 15. This standard was used to analyse valuation uniformity. It was also used to evaluate horizontal equity in property taxation.

To establish the extent of equity for properties in different locations, vertical equity was used for the analysis. Vertical equity exists when the ratio of assessed value to market values is uniform across property value ranges. This was used to determine whether there is equity in land value taxation for properties in different location.

To measure vertical equity, the weighted or aggregate mean was used. It is the ratio of the average site value by Nairobi City to the average estimated market values as estimated in this study. This was used to arrive at the Price Related Differential (PRD). It is used to identify whether there is any bias between the valuation of properties in high income and low-income residential areas (Bell and Bowman, 2002). IAAO (2013) provides PRD as the index for measuring vertical equity and gives the formulae for calculating PRD as dividing the mean ratio by the weighted mean ratio.

According to IAAO (2013, p. 14) "PRD should be close to 1.00. Measures above 1.00 tend to indicate assessment regressivity while measures below 1.00 indicate assessment progressivity." Where the PRD is 1.00 it is an indication that there is no systematic bias in favour of low or high value properties.

Further Payton (2016, p. 184) notes that *"*PRD is a measure for vertical equity. It is an index that is centred on the number one. That is, if there is no vertical inequity, the index will be one. It is calculated by taking the overall mean assessment-sales ratio of a jurisdiction and dividing it by the sum of assessment divided by the sum of sale price (weighted average).

Any number below one indicates that higher priced homes are generally over-assessed. Conversely, a number above one indicates that lower priced properties are generally over-assessed. Acceptable practices will produce a PRD index between 0.98 and 1.03 according IAAO standards for quality assessment"

Nairobi uses both the site value rating and the area rating systems. The land rates in Riruta area are based on area rates per area of land, while land rates in Kilimani and Burburu areas are based on site value rating. To compare the taxation within the different tax system, effective tax rate (ETR) was used. This is the ratio of tax paid to the market value of the property (McMillen, 2013).

Area rating does not use market value of the property. In this research the estimated market value of the sampled properties in Kilimani, Riruta and Buruburu as at 2016 will be used. The ETR is therefore the ratio of tax paid in 2016 to the estimated market value of the properties in 2016. Where the property tax system is equitable, the properties in the same jurisdiction should be taxed at the same effective tax rate (Allen and Dare, 2002).

3.8.3. Policy implication of equity on property taxation

The results obtained from objective one and three were used to come up with policy implications of equity on property taxation in Nairobi City. Thematic analysis was used to analyse the result in line with best practices in the world that enhance equity in property taxation.

Table 3-6: Summary of the research framework

Research objective	Unit of analysis	Variable/ Indicator	Type of data	Data source
Objective one – To property tax base and coverage	-Total area of land in the City -Total area of land under site value and area rating -Total land that is excluded from rating -Number of properties in the City	Use ratios and percentages	Quantitative	NCC, MLPP, publications, maps
Objective two- To evaluate and measure the level of equity in property taxation in Nairobi City.	Land and property values for different case study areas	-Assessed value -Market value of vacant site -Properties in same and different location in the study area -Horizontal equity -Vertical equity	Quantitative	NCC, estimated values by the researcher
Objective three- to evaluate the policy implications of equity in local property taxation in Nairobi City	Best practices in property tax base and coverage, assessment and setting of tax rates	-Tax base -Tax law -Exemptions -Assessment cycles	Descriptive	Analysis of the research findings from objective 1 and 2 in view of best practices in the world

Source: Author's construct (2018)

CHAPTER 4 : PROPERTY TAX BASE AND COVERAGE IN NAIROBI CITY

This Chapter discusses the research findings for objective 1 on evaluation of the property tax base and coverage.

4.1. Legal provision and property tax base

The property tax base relies on national laws that were enacted in the 1960s with minor amendments done over the years. The Valuation for Rating Act (VRA) cap 266 of the laws of Kenya commenced in 1956 while the Rating Act (RA) cap 267 commenced in 1963. These laws were enacted before Kenya adopted the devolved form of government where local authorities had to get approval from the minister of local government on most of the property tax administration processes such as adopting any form of rating, preparation of the valuation roll and raising the tax rate to above 4% of the site value. The laws have not been amended to reflect the new dispensation and there is therefore a legal lacuna especially when they refer to approval being given by the Minister for Local governments, a position that is currently non-existent.

The RA provides for the imposition of rates on both land and buildings in Kenya by Local Governments and allows for different forms of rating namely, area rating, agricultural rental value rate and site value rate or a site value rate in combination with an improved rate. Site value is the value of the unimproved land as appearing in the valuation roll. VRA defines land as including any improvement on, in or under the land. The leeway to choose the different types of rating has resulted to Nairobi City and other local authorities in Kenya relying on the site value and area rating for property taxation.

Improvement in relation to land includes all work done or materials used on the land to increase its value. It however does not include machinery. Assessment for improvement rate on land means the residual amount after deducting the value of the unimproved land from the value of the land.

4.1.1. Site/land value base

According to McCluskey, (2007) land taxation was first introduced in Kenya in 1900 by the British Government. It was first applied in Mombasa municipality on annual rental value basis under street cleaning and regulations and in Nairobi in 1923. Very few

properties had been developed in Nairobi and it was therefore found to be inadequate. In 1928, the unimproved site value rating was adapted with an aim of widening the tax base. This was in conformity with the existing systems in the other British colonies of Australia, New Zealand and Western Canada. However, in England, this system was found unsuitable for growing townships.

Nairobi City has adapted the taxation of the unimproved site value, though the existing legislations- Rating Act cap 267 allows for the taxation of either the vacant land or land and the improvements. The SVR was adapted for areas that were provided with urban services namely, piped water, sewerage, tar-surfaced roads. The areas also had approved development plans that are used to guide development and specify the land uses in various zones.

Table 4-1: Site Value Rating Planning Zones in Nairobi City

Zone	Location	Type of development allowed	Min plot size (Ha)
1A	Core CBD	Commercial/Residential/Light Industry	0.05
1B	Upper Hill	Commercial/Offices/ Residential	0.05
2	Eastleigh, Pumwani, Ziwani, Starehe	Commercial/Residential (High-rise Flats)	0.05
3	Parklands, Westlands	Commercial/Residential (High- rise Flats)	0.05
4	Spring Valley, Riverside, Kileleshwa, Woodley, Thompson	Residential (Apartments allowed on sewer only) – Four Storeys Max.	0.05
5	Spring valley, Kyuna, Loresho, Lavington	Low-Density Residential One-Family House, maisonettes allowed where there is sewer	0.2 on no sewer 0.1 on sewer
6	Muthaiga, new Muthaiga	Low residential single-family dwelling	0.2
8	Donholm, Buruburu, Komarock,	Mixed development, flats, bungalows, maisonettes	0.05
9	Main industrial area, Kariobangi, Mathare North, Ruaraka	Industries, godowns, light industries	0.01-0.05

Source: Nairobi City (2017)

4.1.2. Area rating

The Rating Act (ROK, 2012) allows for the adoption of different methods of area rating based on the area of the land including; a flat rate, a graduated rate, a differential flat rate according to use of the land, an industrial rate and any other methods of rating on the area of land or buildings or other immovable property as the rating authority may adapt. The Act allows the rating authority to adapt different methods of rating and to vary the methods. According to the law, rating can either be on unimproved site value or on the improvement.

Nairobi City uses a mixture of both site value and area rating. The land under rating was previously in the outskirts of the city and was formally agricultural land. The land was not serviced with tarmac roads, sewerage network and other urban services. But with passage of time and urbanisation, these areas have been provided with some urban services and have changed use to residential, commercial, and industrial areas. There are four zones that are under area rating as follows; -

a) **Northern Zone**- Kamuthi Farmers, Jua kali (Kahawa West), Kamae, Githieko, Githurai, Drumvale Company, Ruai.
b) **Eastern Zone**- Buruburu Farmers, Kamulu, Ngundu Farmers, Embakasi Ranching company, Mihango
c) **South Eastern Zone**- areas adjoining Jomo Kenyatta International Airport.
d) **Western Zone**- Dagoretti Division

These areas are under a flat rate on a graduated scale depending on the size of the land.

Table 4-2: Area rates in NCC as at first January, 2017

Land size (Ha)	**Annual rate (Kshs.)**	**Analysis rate (Ksh) per m^2 on the upper limit plot size**
0.1	1000 per plot	1
0.1-0.2	1200 per plot	1.66
0.2-0.4	1500 per plot	2.66
Above 0.4	1700 per acre	0.42

Source: Authors construct from information from Nairobi City (2018)

Residential plots that are below 0.1 Hectares are charged Kshs.1000 per plot per year while Commercial and industrial plots that are below 0.1 Hectares are charged Ksh.1500 per plot per year.

From Table 4.2 above, the analysed rates per annum of different sizes of plots will be as follows; - 0.1 Ha. - at Kshs.1 per metre square; 0.1- 0.2 Ha at Kshs. 1.66 6 per metre square; 0.2- 0.4 Ha at Kshs. 2.66 per square metre and above 0.4 Ha at Kshs.2.35 per square metre. The rates are graduated where smaller plots are charged less per metre square but for land above 1 acre, the rates are low at Kshs. 0.42 per square metre. The forest land in Nairobi is charged area rates

Table 4-3: Forests in Nairobi City

Name of the Forest	**Area (Ha)**	**Managing Authority**
Nairobi National Park	11640	KWS
Karura Forest	1063	KFS
Ngong Forest	638.4	KFS and KFS
Ololua Forest	667.0	NCC & National Museums of Kenya
Nairobi City Park	60.0	NCC
Total area	**14,068.3**	

Source: (CCN, 2006)

The total surface area of Nairobi City is 69,630 Ha. Therefore, forest land forms about 20.20% of the total land in the City. Property tax is paid under area rating as provided in Table 4.3 above. Payment of rates on forest land falls under the National Government. The Government has not been paying rates for forest land and for land under its occupation which is charged contribution in lieu of rates.

4.1.3. The rateable owner

According to Valuation for Rating Act a rate-able owner is defined as; -

- Owner of a registered freehold or the tenant for life of a property
- Lessee of a property for a period of not less than 25 years
- Lessee of a public land under a registered lease for a period of not less than 25 years

- Owner of land in any jurisdiction where no certificate of ownership has been registered under the Land Titles Act (Cap 282), but who is in possession or is in receipt of rents and profits from such a property
- A lessee from the Local Authority with a registered lease of not less than ten years
- A person who has a registered lease over public land for a definite term of not less than twenty-five years

All land is rateable except the land in the exemptions provided by the legal regimes. The City has however not followed the guidelines on rateable owner and have left out many properties from taxation through administrative processes as discussed in 4.2.2. Administrative exemptions or preferential treatment of properties.

Once a local authority has adopted one form of rating in a certain area, it cannot apply a different form of rating. The laws in Kenya allow for site value rating, improvement rating and area rating. All the county governments have adapted site value rating and area rating. In NCC, both the site value and area rating are used.

4.2. Exemptions and administrative omissions to Property tax

The Legal exemptions are broad covering land under different uses, with no clear guidelines on who qualifies resulting to many exemption from property taxation. The exemptions are also spread in various laws which makes the process of reforming them a technical, institutional, and political challenge (Kelly, 2013). When a property is exempted from taxes, it implies that it is free from the obligation of paying taxes. Exemptions are either legally provided for or carried out administratively where the taxing authority decides to exempt some properties.

4.2.1. Legal exemptions to property taxation

The Legal exemptions are spelt out in the Valuation for Rating Act and the Rating Act. The RA provides that;- 'No area rate or agricultural rental value rate shall be imposed on any land which would, under the Valuation for Rating Act or any rules made thereunder, be land in respect of which no valuation for the purposes of any rate may be made.'

Section 27 of the VRA exempts some properties from valuation. It states that, "No valuation for the purposes of any rate shall be made in respect of any land which is used,

or, is bona fide intended to be used within a reasonable time, directly and exclusively for any of the following purposes; -

i. Public religious worship;
ii. Cemeteries, crematoria and burial or burning grounds;
iii. Hospitals or other institutions for the treatment of the sick;
iv. Educational institutions (including public schools within the meaning of the Education Act) whether wholly supported by endowments or voluntary contributions, and including the residence of students provided directly by educational institutions or forming part of, or being ancillary to, educational institutions;
v. Charitable institutions, museums and libraries;
vi. Outdoor sports;
vii. National Parks and National Reserves within the meaning of the Wildlife (Conservation and Management) Act (Cap. 376)

However, land that is used for any profitable purposes and for residential purposes is to be taxed. The above properties may appear in the valuation roll but no value is assigned to them. These properties are exempted from valuation for rating purposes. The rating authority is not therefore able to quantify the magnitude of the exemption in terms of the total value of the land and subsequently the revenue amount of the exemptions.

Land that is used or reserved for roads, public and private streets, car parks, squares, parks, gardens or other open space or under a local authority is also exempt from rating. The Rating Act also grants the rating authority the discretion to reduce the amount charged for rating purposes but with approval from the Minister of Local Government. Section 27 of the RA gives the Minister power to among other things; - "-- prescribing cases in which rates may or shall be reduced or remitted; exempting any person or class of persons from the payment of rates or with respect to specified classes or cases; prescribing the cases or circumstances in which the rating authority may or shall grant exemption from the payment of rates or of any rate or class of rates and the persons and classes of persons who may be exempted; prescribing the extent to which any land shall be exempted from the payment of area rates thereon."

The Rating Act therefore empowered the Minister for local Government to exempt any person or class of person from paying rates. Any institution which falls under charitable institutions may apply to the Minister seeking exemption from payment of rates. These requirements should be reviewed in line with devolution. The position of Minister for Local Government is no longer in existent.

Kenya is a signatory to international laws which exempts diplomatic missions and some international institutions from taxation. This is according to the Privileges and Immunities Act, 1970. The aim of this law is to consolidate the law relating to the immunities, privileges, and capacities of international organizations where Kenya has membership and of other international bodies. Article 23 of the Vienna Convention on Diplomatic Relations states that; -

"The sending state and the head of the mission shall be exempt from all national, regional or municipal dues and taxes in respect of the premises of the mission, whether owned or leased, other than such as represent payment for specific service rendered. The exemption from taxation referred to in this Article shall not apply to such dues and taxes payable under the law of the receiving state by persons contracting with the sending state or the head of the mission."

There are currently eight one embassies and High Commissions in Kenya which are based in Nairobi, as the Capital City of Kenya. The land on which the diplomatic missions are, whether owned or leased, is exempt from local government taxation.

The Bretton Woods institutions, including the International Monetary Fund and the World Bank Group are also exempt from taxation. This is per the Bretton Woods Agreement Act of1963. Chapter 169, Section 9 on immunities from taxation states that:
"– the Bank, its assets, property, income and its operations and transactions authorised by this agreement, shall be immune from all taxation and from all custom duties. --The Bank shall also be immune from liability for collection or payment of any tax or duty."
Properties owned by the Kenya Reinsurance Corporation are also exempt from taxation (ROK, 1997). Property exemptions from rating in Kenya are spread in various laws. As

Kelly (2013) notes, this makes the process of reforming them a technical, institutional and a political challenge.

4.2.2. Administrative omissions or preferential treatment of properties

The property tax register is incomplete due to administrative omissions leading to inequities in property taxation. These properties are not included in tax register due administrative practice. The law does not exempt such properties from taxation, but the exemption is through the current practice of Nairobi City that does not tax any land that does not have a registered title. Under the VRA, where no land registration has occurred, the person in occupation or receiving rent or profits from the land is liable for property taxation. The VRA Section 7(d) provides that a rateable owner shall include;

"in case of property situate in any district, area or place to which the Land Titles Act (Cap. 282) has been applied but being property in respect of which no certificate of ownership has, at such date as aforesaid, been registered under that Act has or claims to have any such leasehold or other interest in the property or, where it cannot be established that any person has or claims to have such an interest, is in possession, or is in receipt of the rents or profits, of such property".

This definition is broad and if implemented would capture many properties and widen the tax base. However, the City only taxes land that has registered title and omits land with no formal title registration. These properties do not appear in the property tax register and it is therefore not possible to quantify the magnitude of the lost revenue and inequities through these omissions. For property that is not registered the City can therefore charge rates to the person in possession of the land or the person who is receiving rent or profits from the properties.

Exempting properties that are not legally registered promotes inequity. The registered land owners that pay tax bear the burden of the unregistered land owners. It also reduces the tax base resulting in reduced revenue from taxation.

The properties that are exempted from taxation through administrative practice include; -

a) Land under informal ownership

Land that is under informal ownership and is not formally registered is not charged land rates. Land in the informal settlements in Nairobi City is mainly owned by the National or County Government but is un-alienated meaning it does not have registered title. It is owned through various means as highlighted by Syagga (2011) in a report on *Land Tenure in Slum Upgrading Projects*. Some land owners have letters of allotment from either the National or the County government but have developed the land without following the laid down planning procedures. Others have been issued with share certificates by the original owners of the land. Some land is owned under temporary occupation certificates which were issued to start business on temporary basis. The holders of such land have however with time converted the land to residential use.

Land under informal settlements is not charged land rates because administratively, the City can only charges rates to properties that have legal titles. Those with allotments letters, share certificates or any other forms of ownership are not included in the tax register. The owners of the allocated land pay annual rents to the authorities. NCC has allocated land in areas in Eastland but has not processed titles for most the owners. These areas include Umoja, Dandora, Kayole, and Embakasi. The plot owners only pay annual rent to the City.

Land under informal settlements in Nairobi has high densities of population. In 1971 there were about 50 settlements with a population of 167,000, This rose to 133 settlements in 1995 with a population of 1,886,000 persons (CCN, 2006). Table 4.4 below highlights the slums in Nairobi, their location, land size and the estimated population. The land under informal land ownership or land that is not surveyed includes; -

i. Land under slum settlements;

From Table 4-4 below, the informal settlements in Nairobi cover an area of about 1052.97 Hectare 2601.88 Acres). In 1971, there were about 50 informal settlements with a population of about 167,000. This rose to 133 settlements in 1995 with a population of about 1,886,000 people (CCN, 2006).

Table 4-4: Informal settlements in Nairobi City

Informal settlement	Area (HA)	Average no of dwellings per acre	Estimated population
Makadara Division			
Mariguini	14.2	300	17040
Express	16.8	300	20160
Mukuru	54.4	300	65280
Langata Division			
Kibera	225.6	220	248160
Mitumba	1.5	200	1200
Bomas	2.1	200	1680
Kasarani Division			
Mathare	73.7	200	58960
Korogocho/ Kinyago	49.2	230	56,580
Thome	7.3	100	2190
Njathini	8.75	100	2624
Garba	13.75	100	4125
Githurai	21.8	100	6540
Kahawa	30.5	100	2985
Kamae	9.95	100	2985
Dagoretti Division			
Ngando	12	100	6000
Riruta	15	100	7500
Karandini	23	100	11500
Kawangare	111	100	55000
Muslim Village	75	100	37500
Village	75	100	37500
Kangemi	14.5	100	7250
Dagoretti	41	100	20500
Waithaka	45	100	22500
Embakasi Division			
Maili Saba	39.7	100	11910
Kayole	23.3	200	13980
Soweto	10	200	6000
Pumwani division			
Buru	4.5	100	3450
Pumwani Village	10	250	10000
Parklands Division			
Runda	11.5	100	3450
Kitisuru	11.25	100	3375
Spring Valley	1.67	100	501

Source: Matrix Development (1993) adapted from CCN (2006, p. 37)

Smolka and De Cesare (2013) recommend extending property taxation to alternative forms of secure tenure. This will increase the universality of the tax. They further note that;

> "Limiting the tax liability to property title holders reduces the tax base in countries with widespread informality. Conventional wisdom now holds that the legal incidence of a tax falls primarily on the person liable for its payment. The owner's liability is usually combined with the public authority's right to seize and dispose of the property when the tax is unpaid. This prerogative is an effective sanction to enforce payment since the tax is secured by the property" (Smolka and De Cesare, 2013, p. 281).

ii. Land allocated by the Nairobi City

Land that has been allocated by the City is also not charged land rates. The owners only pay annual land rent, even though the County has records of the owners and can easily use the records to charge rates. NCC has allocated land in areas in Eastland but has not processed titles for most the owners.

iii. Land held under Share certificates

This is where land owners with huge parcels of previously agricultural land have sub-divided and converted it either to residential, industrial or commercial land. It is then sold to individuals under share certificate ownership. The sub-division schemes, though most of the times approved at the County level are not forwarded to the Department of Survey under the Ministry of Lands and Physical Planning for approval and subsequent registration of the titles. Most of the land in Embakasi, Kasarani, Mwiki and Njiru areas is owned under share certificates.

The change in use and sub-divisions result to enhanced property values. The land may still be recorded at the County register under the main title, but the sub-divisions are not captured in land registration register. The County has been approving development on this land such as building construction, yet they do not charge rates. This results to an administrative exemption of property taxation causing inequity.

b) Land registered under sub-leases

According to the VRA, a rateable owner includes" Lessee of a property for a period of not less than 25 years," NCC does not include properties owned under sub-leases in the property tax register. These are properties that are registered against the main title which is held under leasehold tenure from the Government. The current land laws namely the Land Act Cap 280 of 2012 and the Land Registration Act No. 3 of 2012 allow for registration of sub-leases and therefore the county has legal basis of including such properties in the tax register. The objective of the Sectional Properties Act No. 20 of 1987 is to "--provide for the division of buildings into units to be owned by individual proprietors and common property to be owned by proprietors of the units as tenants in common and to provide for the use and management of the units and common property and connected purposes." The law became operational in 1990, about 28 years ago. The City therefore has legal basis of including properties under sub-lease ownership in the tax register. Before registration of a sub-lease against the main title, the MLPP requests for approval from Nairobi City which can include the property for taxation before giving approval.

This practice by the County has reduced the tax base, reduced equity in property taxation which also impacts of revenue to the County. All properties which are not included do not pay tax and therefore do not contribute to service provision in the City, which is also unfair to the property owners who are included in tax register.

4.3. The property tax register

4.3.1. Updating of the property tax register

As discussed in Chapter 2.5.2., the taxing authority should aim to ensure that all the taxable properties are included in the tax register. The aim should be to have 100% coverage so that no property is excluded which promotes equity in property taxation. According to NCC there has been an increase in the number of properties in the rating register in Nairobi City from 121,000 properties in March 2013, to 155,165 properties in June 2016 and 165,000 properties by June 2017. Most of the increase is due to sub-division of land that is already in the register. It may not necessarily translate to increase in total area under rating or even

the value of the land in the register. The County has a draft valuation roll that was prepared in 2016.

The draft valuation roll has captured a total of 250,000 properties. The tax register therefore has about 62% coverage based on the properties that have been captured in the draft valuation roll. However, the draft valuation roll is also not comprehensive. It excludes properties that are not surveyed. It also excludes registered sub-leases under the Sectional Property Act. It also excludes all development on the land. The coverage at 62% is therefore an overstatement. If the un-surveyed land and the sub-leases are factored in, coverage would be lower than this.

As shown in Table 4-5 below, in Buruburu area, all the 50 properties in the sample were included in the rates register indicating coverage of 100% of the properties in the area. The residential estate was developed in 1975 after land was surveyed and sub-divided. The titles were registered 1975 and records are therefore available at Ministry of Lands and Physical Planning and NCC was able to capture all the properties in the 1982 valuation roll.

However, in Kilimani area, of the seventy properties sampled from Ministry of Lands and Physical Planning, Survey and Records Office (SPRO), only 49 were in the rates register at NCC whereas 21 properties were not included and therefore the coverage is 70%. For Riruta area out of the sample of 50 properties only 23 properties were included in the area rating register of NCC while 27 properties were not included giving coverage of 46%.

Table 4-5: Percentage of properties that are excluded from the tax register

Area	Sample size	Properties in NCC register	Excluded properties	% of exclude properties	Coverage (%)
Buruburu	50	50	0	0	100
Kilimani	70	49	21	30%	70
Riruta	50	23	27	54%	46

Source: Author's construct (2018)

Riruta has the highest percentage of excluded properties, at 54% with coverage of 46%. This is an indication that the property tax register is not fully inclusive and is incomplete.

Kilimani and Riruta areas have undergone random changes such as change of use and sub divisions. The County has therefore not been updating their records to keep up with these changes.

The updating of the land rates register has mainly been through property owners' initiative and not scheduled updating by Nairobi City. This mainly happens when the property owner wants to carry out development on the plot and requests for planning permission or wants to charge or transfer the property. At this point, they are asked for a clearance certificate to show that they do not owe the County any dues. This is the point at which they are captured in the rates register if the property was not in the records. The County is required under the Valuation and Rating Act to carry out a Supplementary valuation roll to update property changes that occur for properties in the valuation roll. However, this is not done regular and was last done in 2012 about 6 years ago. This implies that changes that occurred to properties in the last 4 years have not been capture. This affects the status of the property tax register leading to exclusion of some properties.

There is no provision in Law for updating of the property tax register for the properties that are under area rating. The updating has been done on ad hoc basis with no set time frames.

Any development approval, even when it is approved by NCC does not result to change in the rates register until the title document is changed to that effect. This occurs when the changes are made under the Ministry of Lands and Physical Planning. The County has been approving change of use of land mainly from agricultural to residential and commercial use. This change results to enhanced value of the land. However, the Valuation Department only includes the changes when the title deed is registered to reflect the change. This also applies for sub-divisions and amalgamations. The County is therefore losing out on revenue that would result from the enhanced property value due to failure to promptly include a property in the tax register with the approved change of use.

4.3.2. Land information systems

There is a challenge of land information system both at the national and the Nairobi City levels. In Kenya land registration and survey is a function of the national government under the Ministry of Lands and Physical Planning. The City relies on information from the MLPP on property registration and survey maps. The MLPP has not modernised its land information systems and largely relies on analogue systems. These are prone to errors and loss of data. This in turn affects the credibility of information that Nairobi City uses.

The Nairobi City has a draft GIS based valuation roll that was prepared in 2016 by a private consultant under funding from the World Bank. The draft valuation roll has 118, 000 properties. However out of this total the County has not been able to obtain and verify title search for 36,000 properties from MLPP. This has delayed the finalisation of the draft GIS based valuation roll and thus affecting the capacity of the City to address the issue of equity in property taxation and increasing the revenue capacity of the City.

There is a challenge of un-surveyed land in the City that has affected property taxation. Most of the City's owned land which has been allocated to private individuals has not been surveyed and therefore does not have title deeds. There are other major properties in the City such as where Nyayo House is City Centre which are not surveyed and only have allotment letters from the defunct office of Commissioner of Lands under MLPP. The land which is not surveyed is not included in the tax register. This reduced the potential of the County to earn revenue.

The County uses manual systems for land information. There is no GIS system to link the survey data to the land registration details. The data gathering is therefore cumbersome and prone to omission. Most countries in the world rely of GIS based valuation systems for property taxation because the land data is already in GIS form.

4.3.3. Partnership approach for information

The Valuation Section has an officer who is assigned to get manual information from the MLPP on title searches, sub-divisions and any other changes that occur on the properties that has an impact on the property tax register. There is no arrangement where the County gets regular (e.g. monthly) reports on property changes in Nairobi. The land records at the

MLPP are manual and though there has been an on-going digitisation programme of the land records, what has been done is only scanning of the title deed. The Valuation Section has not partnered with other agencies such as Kenya Revenue Authority, Kenya Power Company and Nairobi City Water and Sewerage Company to get information that can be used to keep the property tax register updated.

As discussed in Chapter 2 properties excluded in the tax register increases property tax inequity. It also unfair for the properties owners whose properties are in the register to carry the tax burden of the owners of the excluded properties. The excluded properties could be paying tax if included. Excluding these properties leads to loss of revenue which has an impact of provision of urban services.

From the on-going it can be said that the property tax base coverage in Nairobi City is incomplete. There are many properties that are left out of the tax register due to administrative exemptions. The practice of not regularly updating the tax register has also resulted to inadequate coverage of property tax base. The implications of the findings from this Chapter on property tax equity and revenue adequacy of Nairobi City are discussed under objective 3 in Section 6.1. of this research.

CHAPTER 5 : EXTENT OF EQUITY IN LOCAL GOVERNMENT PROPERTY TAXATION, NAIROBI CITY

This Chapter discusses the findings of objective 2 of the research which was to assess and measure the level of equity in property taxation in Nairobi City. As discussed in Chapter 2.3.2., the ability to pay theory of property taxation relates property tax to the market value of the property. The property tax is a function of the assessed value of the property tax base and the tax rate. Valuation of the tax base ensures that property taxation is on the current market value capturing the benefits in urban infrastructure services that are capitalized in the property values.

5.1. The property valuation process

In Kenya, the valuation practice is regulated by the Valuers Registration Board which is set up under the Valuers Act. The board registers Valuers who have the required academic and professional qualifications. The Institutional of Surveyors of Kenya is the professional body that constitutes of Valuers, Land Surveyors, Geomatics Engineers, Registered Estate Agents, Property Managers, Building Surveyors, Land Administration Managers and Facilities Managers. Its role is to promote professional ethics among its members. The Valuers fall under the Valuation and Estate Management Surveyor Chapter. It also offers trainings to keep the members abreast with international standards in their profession.

Property taxation is a devolved revenue source for county governments in Kenya under the constitution of Kenya. The Valuation for Rating Act empowers a local authority in Kenya to value land for rating purposes. It provides for the process and the procedures to be followed in this exercise. The VRA and the Rating Act provides for contracting out of valuation of properties to private valuers. The 1982 valuation roll which is used by Nairobi City use was carried out by the Ministry of Lands Valuers. The appointment of a Valuer is provided for in the RA. This is done after a resolution by the LA. The procedure has been that once the LA has resolved on the Valuer or Valuers to carry out the draft valuation or supplementary roll, a gazette notice is done. Failure to follow these procedures can lead to the valuation roll being challenged in court.

5.1.1. Basis of valuation

The basis of valuation is set out Section 8 of the Valuation for Rating as:

- "The value of land shall, for the purposes of a valuation roll or supplementary valuation roll, be the sum which the freehold in possession free from encumbrances therein might be expected to realize at the time of valuation if offered for sale on such reasonable terms and conditions as a bona fide seller might be expected to impose, due regard being had, not only to that particular land, but also to other land of similar class, character or position, and to other comparative factors, and to any restrictions imposed on the land, and on the use of the land, by the local authority or a town planning authority by or under any by-laws or town planning powers, being restrictions which either increase or decrease the value of the land.
- In arriving at the value of land under this section, the Valuer may adopt any suitable method of valuation.
- When a valuation roll or supplementary valuation roll includes the value of the unimproved land, the value of any improvements and the value of the land, then the value of improvements shall in no case exceed the amount found by deducting the value of the unimproved land from the value of the land.

Therefore, the basis of valuation of the unimproved land is market value. This is arrived at by sales comparison of similar land that has been sold in the neighbourhood. The challenge with this method is that most of the land in the study area is developed. In Buruburu Estate, all the plots are developed with residential houses. Using vacant land as a comparable for developed land is not a true reflection of the status of the properties and may lead to as subjective value. There is also a challenge of getting sales comparable for vacant land in the developed parts of Nairobi. The Valuer ends up making a subjective judgement and the value arrived at can be challenged on appeal.

The information included in the main valuation and the supplementary rolls include; -

i. The description, situation and area of the land valued;
ii. The name and address of the rateable owner;
iii. The value of the land;
iv. The value of the unimproved land;

v. The assessment for improvement rate.

This requirement may be excluded with the exemption of the Minister, in the current dispensation, the Governor. A supplementary roll may be prepared to include properties that have been omitted from the main valuation roll, properties that have undergone sub-division, change of use or amalgamation; and, to rectify any errors are that have been made. But the VRA does not give a time frame within which this must be done and NCC last prepared a supplementary roll in 2012. This implies that properties that have been sub-divided, changed use within this period have not been included in the tax register.

5.1.2. Valuation cycles

Currently the Valuation for Rating Act provides for revaluation of properties to be done after every ten years. The law however provides for extension of this period with the approval of the Minister for Local Authority. With devolution and establishment of the Counties, the Ministry was dissolved, making the Counties autonomous. The decision for the extension of the valuation roll is consequently by the County Executive Committee.

NCC last updated its valuation roll in 1982, about 36 years ago and has not therefore adhered to the 10 years' cycles provided for by the VRA. The land values being used as the basis of taxation are obsolete and have insignificant relationship with the current market land values.

As per the VRA, a supplementary valuation roll is to be carried out regularly to capture: -

- Any rateable property omitted from the valuation roll
- Any new rateable property
- Any rateable property which is subdivided or consolidated with other rateable property; or
- Any rateable property which, from any cause particular to such rateable property arising since the time of valuation, has materially increased or decreased in value.

The County has also not been carrying out regular updating of the property tax register through supplementary valuation rolls. The law does not provide the time frames within

which the supplementary valuation rolls should be done which has resulted in laxity of the county to update the register.

5.1.3. Computer assisted mass appraisal

The NCC has been relying on parcel-based valuation method which is cumbersome and costly. The appointed Valuer visits each land parcel and comes up with the value. The professional valuation fees are based on the total value of the land that is arrived at in the valuation roll. Where the valuation for rating purposes is done by the Valuers from National Government under Ministry of Land and Physical Planning, the valuation fee is charged at half the scale of fees provided for under the Valuers Act.

A draft valuation roll prepared in 2016 under a partnership with World Bank is based on GIS mapping and land information of Nairobi County. The County has not been relying on Computer based Mass Appraisal in the valuation process. The updating of the valuation roll is done manually. There is an information technology officer who is seconded from the IT department to update the roll once the Valuers carry out manual valuations on paper. The County has therefore not adapted to modern methods of valuation and updating of the property tax register.

5.1.4. The property tax rate

The property tax rate is set under the County Finance Act which has to undergo public participation. The rate adopted is uniform for all properties types whether residential, commercial or industrial. Due to the fact that Nairobi City has been using a 1982 valuation roll it has attempted to generate more revenue by increasing the property tax rate from an almost stagnant property tax base.

In 2013, the tax rates were increased from 17% of the unimproved site value of land as assessed in 1982 to 34% for all property types, residential, industrial and commercial. These increase in rates, though they lead to increase in revenue generation, do not portray the actual increase in value of properties, therefore affecting equity in taxation.

In 2017, the rate adopted was reduced to 25% from 34% for all properties. 2017 was an election year in Kenya and the reduction was aimed at garnering support for the

incumbents. Politics therefore plays a role in influencing decisions of property taxation in Nairobi City.

5.2. Equity in property taxation based on the value of property

5.2.1. Horizontal equity (assessment of equity for areas under site value rating)

As discussed in Section 2.3.3.1. horizontal equity is used to measure equity among properties which are similarly situated. This is used to assess equity for properties in the same location and same form of property taxation. Buru Buru and Kilimani areas are under site value rating. Riruta is under area rating and therefore did not have an assessed site value. To compare Riruta which is under area rating and Buruburu and Kilimani areas which are under site value rating, Effective tax rate (ETR) was used.

a. Buruburu area

The sample size was 50 properties as indicated in Appendix B. The ratio of assessed value to estimated market value (AV/EMV) was used to indicate the appraisal level, which represents the overall level at which properties were assessed in relation to the estimated market value (De Casare and Ruddock, 1997). It represents the percentage of market value that the properties are assessed at.

As noted by De Casare and Ruddock (1997) “the basic measure for identifying the variability of Assessed values/Sales (Market values) ratios is the coefficient of dispersion (COD) of the median”. The IAAO recommends a COD of maximum 15% for horizontal equity which refers to equity of properties with similar value ranges. It is an indication of uniformity in the valuation process for property with similar market values and located in same neighbourhood.

Appendix E shows the researcher’s analysis of the ratio of unimproved site value (USV) to Estimated market value (EMV) for vacant land as at 2016 market value for Buruburu sample. It also shows the tax payable in 2017 at the tax rate of 25% of the USV. The analysis of Effective Tax Rate (ETR) which is the ratio of tax payable in 2017 over the estimated market value is also indicated.

The mean for the ratio of USV/EMV in Buruburu area was 0.005594. This indicates that the Site value was assessed at 0.5595 % of the estimated market value as at 2016. Where properties are assessed at 100% of their market value, the median should be 1. For the Buruburu sample, the median is 0.005579. This is far below 1 and is an indication that the assessed value is not a reflection of the market value and is far below the market value of the properties.

Coefficient of Dispersion is used as a measure of uniformity in assessment between properties that are similarly located. Where most properties in a jurisdiction are valued at values close to the market values, the COD is low. However, when there are great disparities between the assessed values and the market values the COD is great.

"A COD of zero indicates perfect horizontal equity with no disparities across properties. Any number above zero is the average percentage difference of all properties' assessment-sales ratios from the median ratio of the study area" Payton (2006).

Table 5-1: Unimproved site value/estimated market value ratios for Buruburu

Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.000	.021	3.6%

Source: Author's construct (2018)

For the Buruburu area sample the COD is 0.021 or 2.1%. The recommended value by IAAO is 15%. The disparities in assessed values by Nairobi City among the properties is within the accepted range. This indicates that the property values within the area are almost uniform implying that the valuation is almost uniform for the properties within Buruburu area. The COD for the Effective tax rate (ETR) is also 0.021 which is an indication that the tax burden is evenly distributed among the properties.

There is however a large disparity between the site values currently being used as bases of valuation to the market values of land in the area. This is because of the long-time lag between revaluations, which is almost 35 years.

b. Kilimani area

The sample size for Kilimani area was 71 properties as indicated in Appendix C. The analysis of the Kilimani Sample Data in Appendix F shows the researcher's analysis of the ratio of unimproved site value to Estimated market value of vacant land as at 2016. It also shows the tax payable in 2017 at a tax rate of 25% of the USV. The analysis of Effective tax rate (ETR) which is the ratio of tax payable in 2017 over the estimated market value is also indicated.

Table 5-2: Unimproved site value/estimated market value ratios for Kilimani area.

Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.096	.163	25.1%

Source: Author's construct (2018)

The mean of AV/ ESV for the Kilimani sample is 0.000923. This indicates that the assessed site value that is used as the basis for rating is at 0.0923% of the estimated market value. The Median for the sample is 0.00095 which is way below 1. It is an indication that the properties are assessed below their current market values.

The COD is 0.163 which indicates that the properties within this area are assessed uniformly.

5.2.2. Vertical Equity (for properties under different location)

The assessment of equity in property taxation of properties in different locations was measured using vertical equity. Analysis of vertical equity was discussed under Section 2.3.3.2. and Price Related Differentials (PRD) was used to analyse equity. According to IAAO (2013, p. 14) "PRD should be close to 1.00. Measures above 1.00 tend to indicate assessment regressively while measures below 1.00 indicate assessment progressivity."

Where the PRD is 1.00 it is an indication that there is no systematic bias in favour of low or high value properties. Acceptable PRD as per IAAO ranges from 0.98 to 1.03. These

indicators are used to analyse equity in property taxation between Kilimani and Buruburu areas.

a) Assessment of vertical equity for areas under site value rating

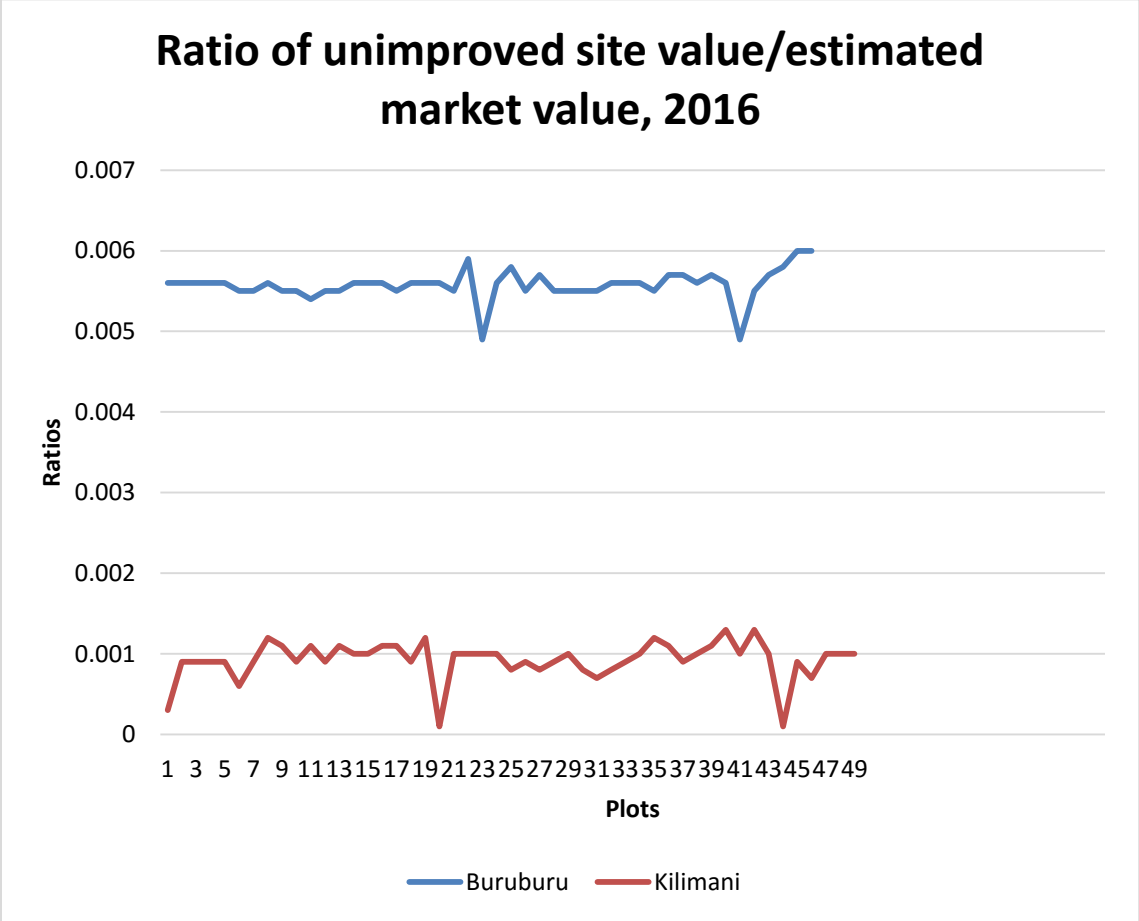
This was used to compare Kilimani, Buruburu areas which was under site value rating. The ratios of unimproved site value (USV) from NCC and the estimated market value as 2016 (EMV) is indicated in Table in Appendix E for Buruburu area and Table in Appendix F for Kilimani area. The PRD obtained from the ration of USV/EMV of the combined Buruburu and Kilimani Samples is 3.576 as indicated in Table 5-3. This is way above the recommended number 1. It is an indication that property taxation is regressive. High valued properties are undervalued and therefore under taxed. Kilimani area which is has high valued properties is taxed at lower levels than Buruburu area. Regressive taxation means that for properties with high values, taxation is lower and therefore this affects the revenue potential of the City.

Table 5-3: Ratio statistics for USV/EMV for Burburu and Kilimani samples

Price Related Differential	Coefficient of Dispersion
3.576	1.812

Source: Author's construct (2018)

Plate 5-1: A comparison of ratio Of USV and EMV, 2016 for Buruburu and Kilimani area Samples



Notes

Buruburu area

Kilimani area

Source: Author construct (2018) from data on Tables in Appendix E and F

The figure shows that the properties in Buruburu are assessed at higher levels of the market value than the Kilimani properties. The ratio of USV/EMV for Buruburu ranges from 0.0049 to 0.006. For Kilimani sample, the ratio of USV/EMV varies from 0.0001 to 0.0013.

A comparison between the assessment levels between Kilimani and Buruburu shows that the properties in Buruburu are valued at 0.5595% of their estimated market value while those in Kilimani are valued at 0.0923% of the estimated market value. Buruburu is a middle-income neighbourhood while Kilimani is a high-income neighbourhood. This shows that the low valued properties are valued at values closer to the market than the high valued properties.

b) Assessment of equity for areas under different forms of rating

To assess equity for areas under different forms of rating, namely site value rating and area rating, Effective Tax Rate (ETR) was used. This is the ratio used to assess the distribution of the tax burden across the properties in different locations.

Riruta was under area rating and therefore did not have an assessed site value and therefore to compare it with properties in Kilimani and Buruburu, which are under site value, rating, ETR was used. This shows how the tax burden is distributed across properties in different locations in terms of tax paid in relation to the market value of the property as at December, 2016, which was assessed by the researcher. The estimated market value for vacant land as at 2016 and ETR for Riruta sample is shown in 5-4 below, for Buruburu is shown in Appendix E and for Kilimani is in Appendix F.

Table 5-4: Ratio statistics for area rate 2017/ estimated market value, 2016 for the Riruta sample under Table 5-5

Price Related Differential	Coefficient of Dispersion
3.813	1.373

Source: Author's construct (2018)

Table 5-5 : EMV, Area Rate and ETR for Riruta area

Sample plot	Area (sq. m)	EMV, 2016	Area rate payable 2017	ETR
1	27110	268.000,000	1700	0.0000063
2	16190	200,000,000	1700	0.0000085
3	12000	148,000,000	1700	0.0000115
4	5670	70,000,000	1700	0.0000243
5	95100	940,000,000	1700	0.0000018
6	19020	188,000,000	1700	0.000009
7	2310	29,000,000	1500	0.0000517
8	1000	12,000,000	1200	0.0001
9	2310	29,000,000	1200	0.0000414
10	8500	105,000,000	1700	0.0000162
11	27111	268,000,000	1700	0.0000063
12	1340	17,000,000	1200	0.0000706
13	490	6,000,000	1000	0.0001667
14	20640	204,000,000	1700	0.0000083
15	1230	15000000	1200	0.00008
16	2510	31000000	1500	0.0000484
17	1660	20000000	1600	0.00008
18	6000	74000000	1700	0.000023
19	5260	65000000	1700	0.0000262
20	6480	80000000	1700	0.0000213
21	6000	74000000	1700	0.000023
22	1340	17000000	1200	0.0000706
23	490	6000000	1000	0.0001667

Notes:

USV- unimproved site value as assessed by NCC

EMV- estimated market value as at 2016 as estimated from sales comparable.

USV/EMV- ratio of unimproved site value over estimated market value

Tax- tax paid in 2017 at the rate of 25% of the USV

ETR- Effective tax rates- ratio of tax payable in 2017 over the estimated market value.

Source: Author's Construct (2018) from Data from NCC and Estimated Market values

Plate 5-2: A comparison of effective tax rates ETR) for Buruburu, Kilimani and Riruta areas

Notes:

Buruburu sample

Kilimani Sample

Riruta Sample

Source: Author's construct (2018)

The data for Plate 5-2 above is is compiled from Effective tax rates for Buruburu and Kilimani in Appendices E and F respectively and Table 5-5 for Riruta data.

From the Plate 5-2, the tax Burden on Buruburu properties is higher than that on the properties in Kilimani and Riruta. The average Effective tax rate (ETR) for Buruburu sample is 0.121, for Kilimani is 0.02289 while that of Riruta is insignificant at 0.000047.

Table 5-6: Statistical analysis of USV and EMV ratios for Buruburu and Kilimani areas

Statistic	Recommended level	Buruburu	Kilimani
% of Mean USV/EMV Ratio	100%	0.5594%	0.0923%
Median centred USV/EMV Ratio	1	3.6%	25.1%
COD	0	0.021	0.163
PRD	1	1	1.096

Source: Author's construct (2018)

5.2.3. Average values of the properties in the sample areas

Table 5-7 shows the average values of properties in the sample areas under unimproved site value as assessed by Nairobi City is the 1982 valuation roll and the estimated market value for vacant land by the researcher as at 2016. The average values were analysed using the mean value for each sample.

Table 5-7: Average land values in the study areas

Study area	Rate per sq.m. in the valuation roll (1982)	Rate per sq.m. (2016)	% increase
Buruburu	95	17,297	18,107%
Kilimani	80	86,500	108,025%
Riruta	-	12,355	-

Source: Author's construct (2018)

Riruta area is under area rating and therefore the land rates charged are not related to the value of the land. Kilimani and Buruburu areas are under site value rating with the values in the valuation roll being far below the market values. The land values in Kilimani have increased by 108,025% while those in Buruburu have increased by 18, 0107%. The City is not taxing the increased land values and this reduces equity in property taxation. The City has also failed to exploit the revenue potential in the increased land values.

5.2.4. Equity based on Capital value of the property

The tax base in Nairobi is based on the value of the unimproved value of the site/land. This was adopted to encourage development of land. The researcher carried out a site survey of the sampled residential properties in Kilimani and Buruburu areas. The Buruburu area is a residential estate where all the 50 plots in the sample are developed with residential houses. Most of the properties in Kilimani are also developed as indicated in Appendix G.

Table 5-8: Summary of development in Kilimani area from the data in Appendix G

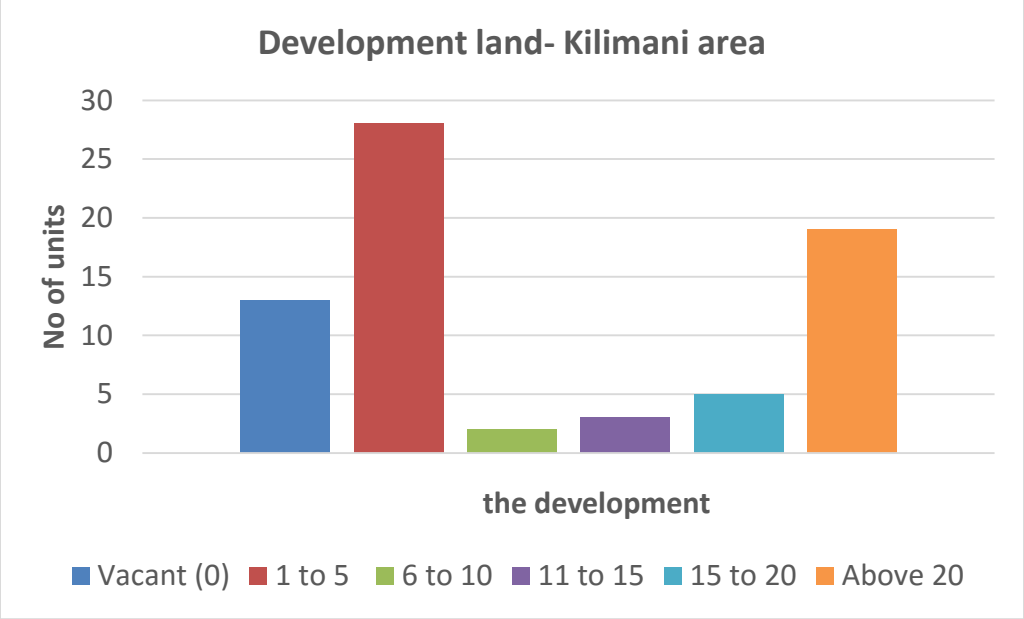
No of housing units per plot	**total**	**% of the total sample**
Vacant (0)	13	19
1-5	28	40
6-10	2	3
11-15	3	4
16-20	5	7
Above 20	19	27
Total	**70**	**100**

Source: Author's construct (2018)

Table 5-8 indicates that out of the total sample of 70 plots in Kilimani area, 13 plots were vacant which represent 19% of the sample; 28 plots or 40% of the sample had 1-5 housing units; 2 plots or 3% of the sample had 6-10 housing units; 3 plots or 4% of the sample had 11-15 housing units; 5 plots or 7% of the sample had 16-20 housing units and 19 plots or 27% of the sample had above 20 housing units.

The table shows that only 13 out of 70 plots in Kilimani were vacant. This was about 19% of the sample. 81% of the sample was therefore developed. About 27% of the samples had above 20 residential units in the plot.

Plate 5-3: A summary of the development in Kilimani area



Source: Author's construct (2018)

Buruburu area falls under Zone 8 of the NCC planning zones. The zone is under mixed development which includes maisonettes, bungalows and site and service schemes which have single rooms. Areas covered under this zone include Donholm, Umoja, Komarock and Kayole. The approved Ground Coverage for development is 50% with a Plot Ratio of 75%. The minimum plot size is 0.05 Ha/ 0.123 Acres.

Kilimani area was initially zoned as a high income, low density residential neighbourhood. With increased urban development, there has been a change in the development policy. The area falls under zone 4 of the NCC planning zone. As per the planning laws it is under residential use, but a survey of the area shows high density commercial and residential uses.

Riruta area has mixed use of agricultural and residential use. There are stand-alone houses and high-rise flats in the area. The area initially did not have sewer. Due to the increased population and development, sewerage works were installed in the area around 2015. The works are still on-going to serve a larger area.

The increase in land development is mainly because of decisions made by the L.G. such as change of user, improved service provision in the form of road network upgrade, sewer provision. These activities are because of capital expenditure by either the Central government or the local government. The L.G. can use the revenue generated to open other areas for development. Nairobi has not been investing in housing for the urban poor. This has resulted to major inequalities in the City.

5.3. Monitoring and Evaluation

To ensure equity in property taxation, the Director valuation noted that they County aims at assessing the properties at current market values but due to the legal challenges and cost constraints, the County has not been able to implement this. There are no mechanisms that have been put into place to ensure that the properties are assessed at market value and to ensure uniformity and equity in assessment.

The current law does not provide for monitoring and evaluation of the property taxation processes of property tax base, coverage and valuation. The property taxation processes are not monitored or evaluated by and independent board. The only provision in law is in the National Land Commission Act, 2012 which mandates the NLC to assess tax on land in any jurisdiction where legally applicable. The Act does not however give the NLC authority to oversee the taxation process in the County.

The County has also not set any strategy by which to monitor the property taxation processes to ensure that all the properties in Nairobi are included in the tax register, that there is uniformity in the valuation processes and therefore ensure equity in property taxation.

The NCC has not set up systems to monitor and evaluate the valuation process. Though the aim is to value all properties at 100% of the market value, there are no systems that ensure that this is done.

5.4. Legal hurdles in property updating the valuation roll

The Nairobi City Council carried out a valuation roll in 2001 and 2005. However, there were numerous litigations from the residents and the rolls were not implemented. Rating is a statutory process which is regulated by the VRA and the RA. The NCC is supposed to

follow procedures laid down in these legislations. It has failed to do this, and the judicial rulings have been in favour of the applicants. That is the reason that it is still relying on a valuation roll of 1982, which is about thirty-six years old.

In the 2006 ruling of Civil Application No. 1654 of 2004 between Jacqueline Resley Versus the City Council of Nairobi (Kenya Law reports), the Court quashed the City's attempt to levy rates under the Draft valuation roll of 2004 which was to be used to levy rates effective 2005. The judgement was mainly because the NCC did not follow the statutory procedures laid down in the Valuation for Rating Act and the Rating Act in carrying out the draft valuation roll. The applicant argued that VRA requires that revaluation be done every after ten years, Since NCC was using a valuation roll that was over ten years, the law VRA required that approval for revaluation be obtained from the Minister for Local Government. This was not done. The Minister's approval was also required in setting the date for valuation. The approval was obtained after the date was already set. The NCC did not follow procedures in contracting to Valuers and tabling the valuation roll before the Council. Due to these omissions, the judgement was made in favour of the applicant.

5.5. Performance of the property tax in Nairobi

The performance of property taxation as a source of Nairobi City has continued to decline over the years as highlighted in Table1.1., Chapter one. Revenue from property tax declined from 3.11 billion in the financial year 2015/16, to 2.253 in 2016/17 to a further 1.871 in 2017/18.

In 2015/2016, the targeted revenue from Land rates was 3.8 billion against the actual collection of 3.1 billion (NCC, 2016). The current revenue potential with the 1982 valuation roll is estimated at 9 billion. During this period, the County was barely able to collect a third of the land rates revenue potential.

NCC has huge amount of debts that can be offset by improving equity in property taxation to increase revenue adequacy of the City. The amount has been increasing from Kshs.63.5 billion in 2013, Kshs.100.2 billion in 2014, and 147.3 billion in 2015 and up to 208.9 billion by 30th June 2016. In the financial year 2015/2016, land rates accounted for 99.3 % of all

the debt owed to NCC (NCC, 2016). The debt includes accumulated interest on outstanding land rates. Most of this amount is owed by Government institutions.

From these discussions, it can be concluded that the property tax base in Nairobi City does not relate to the current market value. This has resulted to lack of equity in property taxation. Section 6.2. discusses the implication of the research findings on equity and revenue adequacy of Nairobi City.

CHAPTER 6 : POLICY IMPLICATIONS OF EQUITY IN PROPERTY TAXATION IN NAIROBI CITY

This chapter addresses objective three of the research which is to evaluate the implications of equity on property taxation and revenue adequacy of Nairobi City. The chapter discusses the implication of the research findings derived from objective 1 and 2 and how they affect equity and revenue generation of the County. The implications are discussed in relation to the property tax base coverage, the valuation of the tax base and monitoring and evaluation.

6.1. The property tax base

Objective 1 showed that NCC relies on site value rating and area rating for property taxation. Site value rating was introduced in Nairobi in 1928 with the aim of widening the tax base and discouraging holding of idle land. Most of the land was not developed and therefore it would not have discouraged land development since a developed land and a vacant one pays the same tax under site value rating. Ninety-nine years since introduction of the rating regime, it has not been changed or modified. As noted, there has been large rise in land development in Nairobi. In Buruburu area, all the plots in the sample are developed. Developed land must be supplied with urban services such as water, sewer, street lighting, garbage collection which are provided by the County at a cost. The County therefore should generate enough revenue from the developments to meet these costs.

Use of site value rating as a basis for property taxation result in the exclusion of the developed element of the land. It affects equity in that two plot owners in the same neighbourhood having similar sized plots, with one developed plot and the other vacant, will pay the same rates. This system therefore benefits the plot owner with the developed land since it enjoys more urban services as compared to a vacant site.

The use of the two different regimes of taxation namely site value tax and area rating affect equity in property taxation. As demonstrated in objective 2, area rating is an unfair system which favours the tax payer more than those under site value rating. Area rating was introduced to previously un-serviced areas and agricultural areas such as Dagoretti, Riruta, Embakasi, and Ruai. These areas have with time become serviced.

In areas around Riruta Township, there is trunk sewer which was installed around 2011 and the area has street lighting and some roads are tarmacked. The development of the City and growth in population has resulted in increased demand for land for residential, commercial and industrial uses resulting in conversion of previously agricultural areas to urban land uses.

The area rating used is a flat rate for similar land sizes in Nairobi irrespective of where the land is located. A quarter of land in an area with sewer, tarmacked access road and street lighting will pay the same amount of Ksh.1000 per annum. In areas with sewer such as Riruta and Kasarani areas, land owners can put apartments in their plots either for sale of for rental purposes. Area rating therefore has no relationship with the value of the plot which is a factor of the services that are available in an area. It therefore narrows the tax base and reduces the revenue potential of the County.

6.1.1. Property tax base coverage

Objective 1 showed that property tax in Nairobi is not all inclusive. There are many properties which have been omitted from the tax register by failure of the County to regularly update the register. NCC last carried out a supplementary valuation roll in 2012. This means that most land changes in terms of change of use and sub-divisions have not been updated in the tax register which further affects the tax base.

The property tax base is further affected by administratively exempting properties from taxation and by having properties legally exempted from taxation. Nairobi, being the Capital of Kenya has many international organisations, charitable institutions and educational institutions which are all exempt from taxation. These institutions rely on urban services to serve their clients but do not contribute to the provision of the same. This raises the tax burden on the properties which are the tax register and reduces equity in property taxation.

The land that is legally exempted and administratively exempted is not included in the tax register. It is therefore difficult to quantify the number and value of properties that are involved and the magnitude of revenue potential that is lost due to such practices.

The legal exemptions have no guide lines on who qualifies as discussed in the case of South Africa in Section 2.9.2. Any land used as an education institution whether by public of private use is exempt from rating and is therefore not valued as provided for in the Valuation for Rating Act. This applies also for land used for outdoor purposes which includes golf courses.

Nairobi is an international hub with many international organisations. There are many international private schools such as International School of Kenya, Brookhouse, Hillcrest Schools are on which are on large tracts of land with Hillcrest Preparatory School being on 52 acres. In 2015 Hillcrest Preparatory School was acquired by the Dubai based GEMS Education for Ksh. 2.6 Billion while Brookhouse school was bought by UK based PE fund Educas for Kshs. 3.6 Billion (Business daily, 2019). The fees paid in these schools cannot compare to those in the public schools in Kenya. A tuition fee for year 12-13 in 2017- 2018 for Brookhouse School was Kshs. 1,980,000 per year while fees for public national school in Kenya are about Ksh. 100,000 per year.

There are also many exclusive golf clubs in Nairobi which are exempt from rates. These include Muthaiga Golf club, Karen County Club, Windsor Golf hotel and County Club. The membership is at very high fees which ordinary Kenyans cannot afford. Yet they also benefit from urban services. These properties are mainly used for profit purposes and having guidelines on how to tax them can boost the revenue potential of the County.

Land which is not registered is not included in the register and is therefore not taxed. This includes informal settlements and un-surveyed land. The owners of this properties benefit from urban service provided by the County and it is unfair that these properties do not contribute to generation of revenue in the County. This further affects equity of property taxation narrows the tax base and reduces the revenue generation capacity of the County.

The exemptions and omissions result into a narrow tax base which affects the City's capacity to generate revenue and to meet its service provision obligations. They also reduce equity of property taxation.

6.1.2. Land information system

Most of the County owned land which has been allocated to private individuals has not been surveyed and therefore does not have title deeds. There are other properties in the County such as where Nyayo House is in Nairobi City Centre which are not surveyed and only have allotment letters from the defunct office of Commissioner of Lands under MLPP. The land which is not surveyed is not included in the tax register. This reduced the potential of the County to earn revenue.

The County uses manual systems for land information. There is no GIS system to link the survey data to the land registration details. The data gathering is therefore cumbersome and prone to omission. Most countries in the world rely of GIS based valuation systems for property taxation because the land data is already in GIS form.

In Kenya, the Department of Survey under MLPP is responsible for surveying of land in the Country. The survey maps that Nairobi City uses originate from MLPP. MLPP should therefore come up with a GIS map of Nairobi which the County can then use to come up with the GIS based valuation system

6.1.3. Partnerships in information gathering

Currently NCC only has an arrangement with MLPP on acquiring information on title details that is used to update the property tax register. The County has not explored ways of partnering with Kenya Revenue Authority which documents information on property ownership and value during payment of stamp duty tax on transfer. KRA is also charging rental income tax and has been carrying out mapping of properties in urban areas in Kenya. NCC and KRA can have a partnership to facilitate information sharing for enhanced property taxation.

Utility companies such as Kenya Power Lighting Company and Nairobi Water and Sewerage Company usually request for land ownership documents and identity cards of the owner of land when giving connection to electricity and water services respectively. Partnerships with these agencies can be beneficial to the County especially for properties which do not have formal title documents, yet they benefit from the provision of urban

services. This can assist in widening the tax base to cover areas that have been left out of the tax bracket and increase the revenue potential of the County.

6.2. Valuation of the tax base

Valuation of the tax base ensures that property taxation is on the current market value capturing the benefits in urban infrastructure services that are capitalized in the property values. Frequent revaluations of the property tax base captures the increase in property values resulting to increase in property tax revenue reducing inequity in property taxation The Nairobi City has however not been carrying out revaluation of the property tax base and relies on an out dated and historical valuation roll for rating of properties under site value rating where the site values have insignificant relationship to the market values. This has resulted to lack of equity in property taxation which has negatively impacted on the revenue adequacy of the City.

Table 6-1: Summary of ratio statistics in Section 5.2.

Study area	% of assessed values by NCC to Estimated market value (2016) by researcher	Median of assessed values to market value (2016)
Buruburu	0.5595%	0.005579
Kilimani	0.0923%	0.00095

Source: Author's construct (2018)

As shown in table 6.1., the site values used by NCC for taxation are far below the market value with Buruburu site values being 0.5595% of the market value while Kilimani, they are 0.0923% of the market value. In Buruburu a sampled plot of 176 square meters has site value of Kshs. 17,000, at 386,000 per acre and annual rates of Ksh. 4250 in 2017, and an estimated market value, 2016 of Kshs. 3,040,000, about Kshs. 70,000,000 per acre. Assuming tax is assessed at 0.05% of the market value, the County would get Ksh. 15,200 per year which is 28% more than the County is currently receiving. In Kilimani area, plot 1 under Appendix E was 6460 square meters with USV of 190,500 at Kshs. 118,338 per acre and annual rates of Kshs. 47,625 in 2017. The estimated market value in 2016 was Kshs. 555,000,000, at Kshs. 347,000,000 per acre. Assuming tax is assessed at 0.05% of

the market value, the County would get Ksh. 277,500 which is 17% more than what the County is currently receiving. The County is therefore losing out on revenue that can be generated from updating the roll to the current market values.

Reliance on site value basis for assessment of the tax base exempts the improvements on the land from taxation. Nairobi is the only City in the world that relies on a purely site value basis for local government taxation. As indicated Section 5.2.4 on equity based of capital value of the property, the sampled properties in Buruburu were all developed. As shown in Table 5-8, in Kilimani 81% of the sample properties were developed with 27% having more than 20 units is a plot. The units are mainly three-bedroom apartments which sell for about Ksh. 17,000,000 depending on size and location. Some plots had 45 apartments with an estimated total value of Kshs. 765,000,000 under capital value. Most of these properties are owned under sub-leases under Sectional Properties Act and therefore the County can easily establish ownership.

By not taxing developments, the county is exempting many developments and property owners from contributing to revenue generation. This is also not fair to the property owners that are under taxation and it reduces equity in property taxation.

The real estate market in Nairobi is robust and improved infrastructure developments has resulted in increased land development and enhanced property values. Though the existing laws provide for taxation of the improvement on land, the county has failed to exploit the great revenue potential in taxing of the development on the land and this practice affects equity in property taxation.

6.2.1. Valuation cycles

By allowing the Local authorities to extend the revaluation cycles beyond the 10 years' period provided for by the Valuation for Rating Act, the law creates a loop-hole that has been used by the County to use obsolete and out-dated valuation rolls. The period of 10 years is long and as shown in Table: 2-5 most countries in the world have a revaluation period of 5 years.

The use of outdated values has denied the County the opportunity to raise revenue from the increased property values in Nairobi.

6.2.2. Computer Assisted mass appraisal

Nairobi County has not adopted mass appraisal of properties for taxation purposes. They rely of parcel-based valuation which is time consuming and costly. Currently the valuation fees for rating purposes in Kenya as provided for in the Valuers Act Cap 532 Subsidiary Legislation 1% for the first Kshs. 2,000,000 and 0.25% for the residue of the assessed property values excluding other expenses. Assuming a market value of Kshs.10 billion, the valuation fees would be about Kshs. 25 million plus expenses. Properties in Nairobi have very high values and the valuation of all the properties will be high. The parcel-based valuation system is also subject to human error since data collection is mainly manual and may result in omitting of properties from the register. All these have a negative implication of the amount of revenue generated and equity of property taxation.

6.2.3. Monitoring and evaluation

Failure by the Nairobi City to set up benchmarks for monitoring and evaluating the property taxation process has resulted in some properties being excluded from taxation, lack of uniformity in the property valuation process and lack of equity in property taxation.

6.3. Summary

In this Chapter the researcher discussed the policy implications of property tax base and coverage under objective one and valuation of the tax base under objective two on equity and revenue adequacy of Nairobi City. The County uses different formats of property taxation which negatively impacts on equity and affects revenue generation potential.

The property tax base is not all inclusive and has numerous exemptions and omissions both legal and administrative. The valuation of the tax base is only done on vacant land and ignores developments on the site.

Nairobi has experience growth in property development. The exclusion of the property developments impacts on the revenue base of the County and results to many beneficiaries of the urban services not contribution to their provision and maintenance.

The lack of regular revaluation of the property tax base has resulted to site values which have no bearing on the market values. This further erodes the revenue raising potential of the County. To address these issues there is need to review the policy on property taxation ant the local government level. The policy changes are recommendations are discussed in the next Chapter 7.

CHAPTER 7 : CONCLUSIONS, POLICY RECOMMENDATIONS AND AREAS OF FURTHER RESEARCH

7.1. Conclusions

This study set out to assess whether there is equity in Local Government property taxation in Kenya, with Nairobi City as the case study.

Objective 1 examined the tax bases for property taxation in Nairobi. The County uses site value and area rating. The use of different tax bases subject properties in the same jurisdiction to different taxation regimes. The study demonstrated that there is no equity the property taxation due to different forms of property tax base. The use of site value rating and area rating has resulted to inequitable property taxation.

The practice of not taxing the development on the land also leads to lack of equity in property taxation which also reduces the capacity of the County to generate revenue from taxation.

The property tax coverage is not complete and all inclusive. There are many properties which are exempted from taxation, due to administrative practices. They include properties that are not registered, and the owners hold letters of allocation from NCC, properties that have been sub-divided and not registered and properties that have been omitted due to poor updating of the property tax register. This transmits the burden of revenue generation and service provision to only a few properties in the tax register. This erodes equity in property taxation.

Objective 2 analysed whether there is equity in property taxation based on the value of the property. The study has demonstrated that for site value rating, the current assessed values are very low and therefore do not relate to the market value of the land.

The practice of not taxing the capital value of the property has left out a huge revenue base that could be used to finance service provision in the City. It is also an unfair practice especially for property owners with vacant land who must pay the same rates as those with multi- buildings. This practice further promotes inequity.

Lack of frequent revaluations of land results to the values used for taxation being archaic and not related to the market value of the properties. The valuation roll currently in use is almost thirty-five years old. This means that the values being used as the base for land taxation have no relation to the market value. The NCC has not therefore captured the increase in property values in Nairobi that have mainly resulted from infrastructure development and urbanisation.

7.2. Recommendations of the study

7.2.1. Review of legal provisions on property taxation

The legal provisions on local government property taxation should be reviewed to address the issues that impact on equity in property taxation. These include; -

a) Repealing of the Valuation for Rating Act and the Rating Act

The two national laws on property taxation should be repealed and combined into one law to guide property taxation for local governments in Kenya. The county governments should not come up with their own laws but should only come up with guidelines on how to implement the national law. Currently counties are coming up with their own property taxation laws because the national laws are inadequate. Nairobi City has a draft Nairobi City County Valuation and Rating Bill that was prepared in 2015 but has not been approved by the County Assembly. The current laws still refer to the Minister of Local Government which position is no longer existent. This will make the laws clear to understand and implement.

b) Currently land rates are charged on registered land only.

The NCC is not charging land rates on land that is under allotment letters. This includes land where the County is the allottee in areas such as Umoja, Dandora, Njiru and Embakasi. The County has records of such properties with which they charge the owners annual land rent. These same records can be used to charge land rates. Excluding such properties from taxation is unfair to other properties owners bear the cost of service provision.

There have been changes in land laws to include Sectional Properties Act where properties are held in common. This includes apartments and sub-divisions where there are sub-tenants. Land that is held under sub-leases should be included in taxation.

The law should be amended to provide for taxation of properties that are not registered but have share certificates or other verifiable ownership documents.

c) Review on the provision on the exempt properties.

The Valuation for Rating Act and the Rating Act provide for blanket exemption of properties used as education institutions, public religious worship, hospitals, outdoor sports, national parks and reserves. The VRA has a provision that such exempted properties should not be used for profit or residential purposes. However as discussed in Chapter 7.1.1, Nairobi has many high cost international schools including Brookhouse School, Hillcrest, International School of Kenya, Gems Cambridge, and others which charge very high school fees. There are also exclusive golf courses such as Muthaiga Golf Course, Karen Golf Course and Windsor which occupy large pieces of land and charge fees to high end clients. These should be considered for profit institutions and should have their exemptions reviewed.

The County should to provide for some criteria under which such properties can be included for rating purposes. What comprises use for profit should be well defined to avoid ambiguity and abuse of the provision.

d) Reduce the period of re-valuation

The current valuation for rating Act provides that revaluation of properties in the valuation rolls be carried out after every ten years. It even provides for extension of the time with the approval of the then Minister for Local Government. That is how NCC has been able to levy land rates with a valuation roll that is over thirty-six years old.

The Valuation for rating Act should be reviewed to reduce the time lag of assessment cycle between preparations of one valuation roll. This can be done through inclusion in the law on land rates to allow for update of values every 3 years. Where the time limit has been set, it should be adhered to in practice to avoid erosion of assessed valued by inflation.

7.2.2. Introduction of mass valuation techniques such as use of GIS.

Currently under site valuation, NCC relies on parcel-based valuation. This is cumbersome, time consuming and costly. The County should adopt modern methods of mass valuation that are computer based and use GIS. This will make the process of updating property values easier and cost effective. The County will therefore be able to carry regular value updates and keep an updated property rates register.

7.2.3. Introduce ratio studies to assess equity in property taxation

There is no provision in law or practice for the County to ensure equity in property taxation. The County is therefore not able to monitor whether there is equity in property taxation, Introduction of ratio studies will ensure that property taxation is related to value of the properties and that all the properties are included in taxation. This will result in more revenue generation from property taxation.

7.2.4. Adaptation of improvement based or capital value property taxation

Area based land rating system based on flat area of land should be abolished for urban areas. There can be area-based system depending on values in a zone where areas with similar values are put under one zone. Site value system should also be abolished to enhance equity and revenue generation potential of the County. The County should have a uniform basis of taxation instead of the current dual system namely area rating and Site value rating.

As noted in this study the County has undergone extensive property development. The use of flat area rating and unimproved site values means that many properties that are enjoying the urban services that are provided by the County are not contributing to the provision of these services. This results to a property taxation system that is not equitable and erodes the revenue potential of the County. The county should move to an improvement-based property rating system to ensure equity and widen its tax base.

7.2.5. Establishment of a complete County Land Information System.

This will enhance land information for taxation purposes and can be used to come up with a comprehensive property tax register for the County.

7.3. Recommendation for further studies

In this study, equity in property tax was examined based on tax base, coverage and value of properties. Further studies can be carried out on how tax collection and enforcement affect equity. Lack of enforcement of tax payment affects equity.

Studies can also be carried out to examine whether there is equity in property taxation of different property uses in the County. The study can examine equity between commercial and residential property uses.

The study is a pioneer study of equity in property taxation in Kenya with Nairobi as the case study area. It opens opportunities for further research on equity in property taxation in Kenya. Studies can be carried out in other urban areas in other Cities and urban areas in Kenya such as Kiambu, Kisumu, Eldoret, Mombasa and Nakuru.

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APPENDICES

Appendix A- Interview guide to The Directorate of Land Valuation and Property Management, Nairobi City County

Topic	Questions
Property tax base and coverage	i. What is the total taxable land area in NCC? ii. What is the total area of land in the property tax register? iii. What is the total number of properties in the Nairobi County? iv. How many properties are in the property tax register? v. How many properties are under the valuation roll? vi. How many properties are under area rating? vii. How are the areas previously outside the tax bracket brought into property taxation? viii. How are records for individual properties developed- through site visits, aerial photographs, maps, or GIS? ix. When was the last valuations done? x. How often are the valuations updated? i.e. supplementary valuation roll xi. Are properties which do not have formal title documents included in the tax register? xii. Is the answer above is Yes, what is the total number of such properties? xiii. Can you avail data on the areas that have been brought under the property taxation bracket for the last 5 years? (include the areas, user of the property and the number of properties) xiv. How often is the property register updated to take into consideration subdivisions, change of user and amalgamations? xv. Provide details of what has been done on the above for the last five years. xvi. Do you have details on the properties that have not been incorporated in the tax bracket in the Nairobi County and in the study areas? xvii. Do you have targets of property base coverage?

	xviii. If so, what are the current targets? xix. Have the targets been achieved? xx. What has resulted in achievement or failure to achieve the target? xxi. What are the linkages and corroborations with other Government departments such as Ministry of Lands, Kenya Power & Lighting Company, Kenya Revenue Authority on data sharing to keep the property tax register up to date? xxii. What are the linkages with the Departments within NCC such as Planning Department, Nairobi Water and Sewerage Company on sharing on information to up-date the property tax register? xxiii. Do you have an estimate of the properties that are not currently in the tax register? xxiv. What are the challenges you have faced in ensuring complete coverage of the property tax in Nairobi? **Exemptions** i. Which are the properties that are currently legally exempted? ii. Which are the properties that are administratively exempted from rating? iii. What are the reasons for the exemptions? iv. What is the total area of exempted properties? v. What is the taxable value of the exempted properties in Nairobi, in Kilimani and Riruta areas?
Property tax valuation	i. How often are revaluations done? ii. Does the County have provision for a legal assessment date? iii. What is the basis of valuation adapted by the County? iv. Why has the County not adopted capital value basis of valuation? v. What are the challenges faced in valuation of property? vi. What measures is the County adopting in valuations of the properties? **<u>Area rating</u>** i. Which are the areas that currently fall under area-based taxation? ii. What is the total area of the land that is under area rating?

	iii. What are the guidelines followed in determining that an area will be put under the area-based taxation? iv. When were these guidelines established? v. How often are the guidelines reviewed? vi. When an area undergoes increase in development, is it usually upgraded to site value rating? **<u>Land allocated by the Nairobi County</u>** i. What is the size of the land allocated by NCC ii. Where is it located? iii. Is this land under the valuation roll? iv. If not, how is rating of this land done? **Capital Value rating** **i.** Why has the County not adapted Capital Value rating despite there being legal provision?
General property tax administration process	i. Does the NCC conduct performance audits or review of property valuation and assessment procedures or practices? ii. If the performance audits are done, how do you evaluate property tax performance in terms of: - • Coverage/ tax base • Valuation • equity iii. Is this done under a legal provision or administrative rule iv. What significant developments have occurred in Nairobi County on property taxation i.e. legislation, court decisions, and administrative policies?
Equity in property taxation	i. What measures has the council adapted to ensure that there is equity in property taxation? ii. How does the County evaluate equity in property taxation? iii. Why does the County continue to use different types of taxation in the City? i.e. Area based rating and site value rating. iv. Why has the County not adapted capital value rating?

Source: Author's construct (2018)

Appendix B: Table of sample properties in Buruburu area showing land reference number, size in sq.m and USV

	Land reference No.	sq.m.	USV (NCC)-Ksh.
1	Nairobi/ Block 74/5	176	17000
2	Nairobi/ Block 74/10	146	14000
3	Nairobi/ Block 74/15	144	14000
4	Nairobi/ Block 74/20	144	14000
5	Nairobi/ Block 74/70	187	18000
6	Nairobi/ Block 74/80	164	15500
7	Nairobi/ Block 74/90	168	16000
8	Nairobi/ Block 74/100	160	15500
9	Nairobi/ Block 74/110	174	16500
10	Nairobi/ Block 74/120	147	14000
11	Nairobi/ Block 74/130	128	12000
12	Nairobi/ Block 74/140	146	14000
13	Nairobi/ Block 74/250	146	14000
14	Nairobi/ Block 74/260	170	16500
15	Nairobi/ Block 74/270	144	14000
16	Nairobi/ Block 74/280	144	14000
17	Nairobi/ Block 74/290	147	14000
18	Nairobi/ Block 74/320	144	14000
19	Nairobi/ Block 74/360	145	14000
20	Nairobi/ Block 74/390	170	16500
21	Nairobi/Block 75/100	168	16000
22	Nairobi/Block 75/120	138	14000
23	Nairobi/Block 75/140	166	14000
24	Nairobi/Block 75/160	197	19000
25	Nairobi/Block 75/180	144	14000
26	Nairobi/Block 75/200	126	12000
27	Nairobi/Block 75/300	128	12500
28	Nairobi/Block 75/320	110	10500
29	Nairobi/Block 75/340	168	16000
30	Nairobi/Block 75/360	141	13500

31	Nairobi/Block 75/380	37	3500
32	Nairobi/Block 75/420	165	16000
33	Nairobi/Block 75/440	145	14000
34	Nairobi/Block 75/460	144	14000
35	Nairobi/Block 75/570	142	13500
36	Nairobi/Block 75/580	189	18500
37	Nairobi/Block 75/590	189	18500
38	Nairobi/Block 75/600	191	18500
39	Nairobi/Block 75/650	189	18500
40	Nairobi/Block 75/700	156	15000
41	Nairobi/Block 76/160	166	14000
42	Nairobi/Block 76/170	126	12000
43	Nairobi/Block 76/180	141	14000
44	Nairobi/Block 76/190	145	14000
45	Nairobi/Block 76/200	130	13000
46	Nairobi/Block 76/210	170	17000
47	Nairobi/Block 76/220	190	19000
48	Nairobi/Block 76/230	145	14000
49	Nairobi/Block 76/240	144	14000
50	Nairobi/Block 76/250	156	15000

Source: Author’s construct (2018)

Appendix C: Table sample properties in Kilimani area showing land reference number, size in sq.m. and USV

	L.R. NO.	Area (Sq.m.)	USV (NCC)-Ksh.
1	L.R. 1/229	6460	190,500
2	L.R. 1/240	400.2	no record
3	L.R. 1/250	4479	331500
4	L.R. 1/270	26835	327000
5	L.R. 1/301	23869	304,000
6	L.R. 1/322	3925	305000
7	L.R. 1/350	3039	163000
8	L.R. 1/380	3966	299500
9	L.R. 1/420	2873	205000
10	L.R. 1/450	2104	197000
11	L.R. 1/490	25	185000
12	L.R. 1/530	1594	152000
13	L.R. 1/580	748	no record
14	L.R. 1/630	6697	no record
15	L.R. 1/680	824	80000
16	L.R. 1/720	205	18500
17	L.R. 1/770	1042	89500
18	L.R. 1/824	112.5	110000
19	L.R. 1/870	868	84000
20	L.R. 1/920	3557	272500
21	L.R. 1/970	307	no record
22	L.R. 1/990	1336	140500
23	L.R. 1/1000	3779	36000
24	L.R. 1/1055	195	17500
25	L.R. 1/1073	200	18000
26	L.R. 1/1134	1783	168000
27	L.R. 1/1136	1754	no record
28	L.R. 1/1359	3982	no record
29	L.R. 1/1370	1998	no record
30	L.R. 2/15	4046	342000
31	L.R. 2/31/1	6745	468000
32	L.R. 2/52/2	2401	184000
33	L.R. 2/75	9024	602000
34	L.R. 2/107	3755	no record
35	L.R. 2/110	3852	no record
36	L.R. 2/121	4018	315000
37	L.R. 2/130	3318	no record
38	L.R. 2/150	3850	318500
39	L.R. 2/173	3982	270000
40	L.R. 2/190	4880	315000
41	L.R. 2/214	4694	320000

42	L.R. 2/249	2832	217000
43	L.R. 2/270	3035	257000
44	L.R. 2/300	978	105500
45	L.R. 2/320	2023	190500
46	L.R. 2/350	529	42000
47	L.R. 2/399	1179	exempt
48	L.R. 2/410	1469	no record
49	L.R. 2/421	2164	186500
50	L.R. 2/440	464	45000
51	L.R. 2/461	302.6	no record
52	L.R. 2/481	1105	no record
53	L.R. 2/501	1337	no record
54	L.R. 2/521	210	22500
55	L.R. 2/550	618	53000
57	L.R. 2/590	374	40,000.00
58	L.R. 2/605	9282	no record
59	L.R. 2/710	1932	no record
60	L.R. 2/717	854	no record
61	L.R. 2/700	4047	no record
62	L.R. 2/552	302	26000
63	L.R. 2/537	1960	21020
64	L.R. 2/52	1967	no record
65	L.R. 2/57	4042	no record
66	L.R. 2/66	4310	323500
67	L.R. 2/119	5220	317,000
68	L.R. 2/137	4047	333,000
69	L.R. 2/141	4046	333,000
70	L.R. 2/160	3000	no record
71	L.R. 2/168	3000	254,000

Source: Author's construct (2018)

Appendix D: Table on Land reference numbers and area rates payable - Riruta area

	Land reference No.	Area (sq.m.)	Area rate (NCC), 2017
1.	Dagoretti/ Riruta/10	27110	1700
2.	Dagoretti/ Riruta/15	16190	1700
3.	Dagoretti/ Riruta/20	12000	1700
4.	Dagoretti/ Riruta/30	2000	no record
5.	Dagoretti/ Riruta/40	1900	no record
6.	Dagoretti/ Riruta/50	5670	1700
7.	Dagoretti/ Riruta/55	950	no record
8.	Dagoretti/ Riruta/60	95100	1700
9.	Dagoretti/ Riruta/70	750	no record
10.	Dagoretti/ Riruta/80	18000	no record
11.	Dagoretti/ Riruta/90	16000	no record
12.	Dagoretti/ Riruta/100	18000	no record
13.	Dagoretti/ Riruta/110	19020	1700
14.	Dagoretti/ Riruta/120	2000	no record
15.	Dagoretti/ Riruta/130	500	no record
16.	Dagoretti/ Riruta/140	750	no record
17.	Dagoretti/ Riruta/200	600	no record
18.	Dagoretti/ Riruta/210	850	no record
19.	Dagoretti/ Riruta/220	490	no record
20.	Dagoretti/ Riruta/240	2100	no record
21.	Dagoretti/ Riruta/260	600	no record
22.	Dagoretti/ Riruta/265	2310	1500
23.	Dagoretti/ Riruta/275	1000	1200
24.	Dagoretti/ Riruta/310	2310	1200
25.	Dagoretti/ Riruta/475	8500	1700
26.	Dagoretti/ Riruta/300	27111	1700
27.	Dagoretti/ Riruta/310	7000	
28.	Dagoretti/ Riruta/320	1340	1200
29.	Dagoretti/ Riruta/340	490	1000
30.	Dagoretti/ Riruta/400	600	no record

31.	Dagoretti/ Riruta/410	850	no record
32.	Dagoretti/ Riruta/420	500	no record
33.	Dagoretti/ Riruta/430	600	no record
34.	Dagoretti/ Riruta/215	850	no record
35.	Dagoretti/ Riruta/225	750	no record
36.	Dagoretti/ Riruta/230	20640	1700
37.	Dagoretti/ Riruta/235	500	no record
38.	Dagoretti/ Riruta/245	490	no record
39.	Dagoretti/ Riruta/310	1230	1200
40.	Dagoretti/ Riruta/315	900	no record
41.	Dagoretti/ Riruta/325	750	no record
42.	Dagoretti/ Riruta/335	2510	1500
43.	Dagoretti/ Riruta/425	1660	1600
44.	Dagoretti/ Riruta/435	6000	1700
45.	Dagoretti/ Riruta/445	1500	no record
46.	Dagoretti/ Riruta/455	5260	1700
47.	Dagoretti/ Riruta/460	6480	1700
48.	Dagoretti/ Riruta/435	6000	1700
49.	Dagoretti/ Riruta/320	1340	1200
50.	Dagoretti/ Riruta/340	490	1000

Source: Author's construct (2018)

Appendix E- Table on Area, USV, EMV and ETR for Buruburu area

	Area (sq. m)	USV	EMV (Ksh. 2016)	Ratio (USV/EMV)	Tax payable (Ksh)	ETR
1.	176	17000	3040000	0.0056	4250	0.0014
2.	146	14000	2520000	0.0056	3500	0.00139
3.	144	14000	2490000	0.0056	3500	0.00141
4.	144	14000	2490000	0.0056	3500	0.00141
5.	187	18000	3230000	0.0056	4500	0.00139
6.	164	15500	2840000	0.0055	3875	0.00136
7.	168	16000	2900000	0.0055	4000	0.00138
8.	160	15500	2770000	0.0056	3875	0.0014
9.	174	16500	3000000	0.0055	4125	0.00138
10.	147	14000	2540000	0.0055	3500	0.00138
11.	128	12000	2210000	0.0054	3000	0.00136
12.	146	14000	2530000	0.0055	3500	0.00138
13.	146	14000	2530000	0.0055	3500	0.00138
14.	170	16500	2940000	0.0056	4125	0.0014
15.	144	14000	2490000	0.0056	3500	0.00141
16.	144	14000	2490000	0.0056	3500	0.00141
17.	147	14000	2540000	0.0055	3500	0.00138
18.	144	14000	2490000	0.0056	3500	0.00141
19.	145	14000	2500000	0.0056	3500	0.0014
20.	170	16500	2940000	0.0056	4125	0.0014
21.	168	16000	2900000	0.0055	4000	0.00138
22.	138	14000	2390000	0.0059	3500	0.00146
23.	166	14000	2870000	0.0049	3500	0.00122
24.	197	19000	3400000	0.0056	4750	0.0014
25.	144	14000	2400000	0.0058	3500	0.00146
26.	126	12000	2180000	0.0055	3000	0.00138

27.	128	12500	2210000	0.0057	3125	0.00141
28.	110	10500	1900000	0.0055	2625	0.00138
29.	168	16000	2900000	0.0055	4000	0.00138
30.	141	13500	2440000	0.0055	3375	0.00138
31.	37	3500	640000	0.0055	875	0.00137
32.	165	16000	2850000	0.0056	4000	0.0014
33.	145	14000	2500000	0.0056	3500	0.0014
34.	144	14000	2490000	0.0056	3500	0.00141
35.	142	13500	2460000	0.0055	3375	0.00137
36.	189	18500	3270000	0.0057	4625	0.00141
37.	189	18500	3270000	0.0057	4625	0.00141
38.	191	18500	3300000	0.0056	4625	0.0014
39.	189	18500	3270000	0.0057	4625	0.00141
40.	156	15000	2700000	0.0056	3750	0.00139
41.	166	14000	2870000	0.0049	3500	0.00122
42.	126	12000	2180000	0.0055	3000	0.00138
43.	141	14000	2440000	0.0057	3500	0.00143
44.	145	14000	2400000	0.0058	3500	0.00146
45.	130	13000	2150000	0.006	3250	0.00151
46.	170	17000	2810000	0.006	4250	0.00151

Notes:

USV- unimproved site value as assessed by NCC

EMV- estimated market value as at 2016 as estimated from sales comparable.

USV/EMV- ratio of unimproved site value over estimated market value

Tax- tax paid in 2017 at the rate of 25% of the USV

ETR- Effective tax rates- ratio of tax payable in 2017 over the estimated market value.

Source: Author's Construct (2018) from Data from NCC and Estimated Market values

Appendix F: Table on USV, EMV, Tax Payable and ETR for Kilimani area

	Area (sq.)	USV	EMV, 2016	TAX payable, 2017	Ratio (USV/EMV	ETR
1.	6460	190500	555000000	47625	0.0003	0.0001
2.	4480	331500	387000000	82875	0.0009	0.0002
3.	4395	327000	380000000	81750	0.0009	0.0002
4.	3909	304000	338000000	76000	0.0009	0.0002
5.	3926	305000	340000000	76250	0.0009	0.0002
6.	3042	163000	260000000	40750	0.0006	0.0002
7.	3966	299500	340000000	74875	0.0009	0.0002
8.	2876	295000	248000000	73750	0.0012	0.0003
9.	2104	197000	182000000	49250	0.0011	0.0003
10	2500	185000	216000000	46250	0.0009	0.0002
11	1596	152000	137900000	38000	0.0011	0.0003
12	6697	535790	580000000	133947.5	0.0009	0.0002
13	824	80000	70000000	20000	0.0011	0.0003
14	205	18500	17700000	4625	0.001	0.0003
15	1042	89500	90000000	22375	0.001	0.0002
16	1125	110000	97000000	27500	0.0011	0.0003
17	868	84000	75000000	21000	0.0011	0.0003
18	3557	272500	307000000	68125	0.0009	0.0002
19	1336	140500	115000000	35125	0.0012	0.0003
20	3779	36000	326000000	9000	0.0001	0.0000
21	195	17500	16800000	4375	0.001	0.0003
22	200	18000	17300000	4500	0.001	0.0003
23	1783	168000	172000000	42000	0.001	0.0002
24	4050	342000	350000000	85500	0.001	0.0002
25	6750	468000	583000000	117000	0.0008	0.0002
26	2403	184000	200000000	46000	0.0009	0.0002
27	9032	602000	780000000	150500	0.0008	0.0002
28	4022	315000	347000000	78750	0.0009	0.0002
29	3850	318500	332000000	79625	0.001	0.0002
30	3985	270000	344000000	67500	0.0008	0.0002
31	4884	315000	422000000	78750	0.0007	0.0002
32	4520	320000	390000000	80000	0.0008	0.0002
33	2835	217000	245000000	54250	0.0009	0.0002

34	3038	257000	262000000	64250	0.001	0.0002
35	978	105500	84500000	26375	0.0012	0.0003
36	2023	190500	175000000	47625	0.0011	0.0003
37	529	42000	45700000	10500	0.0009	0.0002
38	2164	186500	187000000	46625	0.001	0.0002
39	464	45000	40000000	11250	0.0011	0.0003
40	210	22500	18000000	5625	0.0013	0.0003
41	618	53000	53000000	13250	0.001	0.0003
42	374	40000	32000000	10000	0.0013	0.0003
43	302	26000	26000000	6500	0.001	0.0003
44	1960	21020	170000000	5255	0.0001	0.0000
45	4310	323500	373000000	80875	0.0009	0.0002
46	5225	317000	450000000	79250	0.0007	0.0002
47	4047	333000	350000000	83250	0.001	0.0002
48	4050	333000	350000000	83250	0.001	0.0002
49	3000	254000	260000000	63500	0.001	0.0002

Notes:

USV- unimproved site value as assessed by NCC

EMV- estimated market value as at 2016 as estimated from sales comparable.

USV/EMV- ratio of unimproved site value over estimated market value

Tax- tax paid in 2017 at the rate of 25% of the USV

ETR- Effective tax rates- ratio of tax payable in 2017 over the estimated market value.

Source: Author's construct (2018)

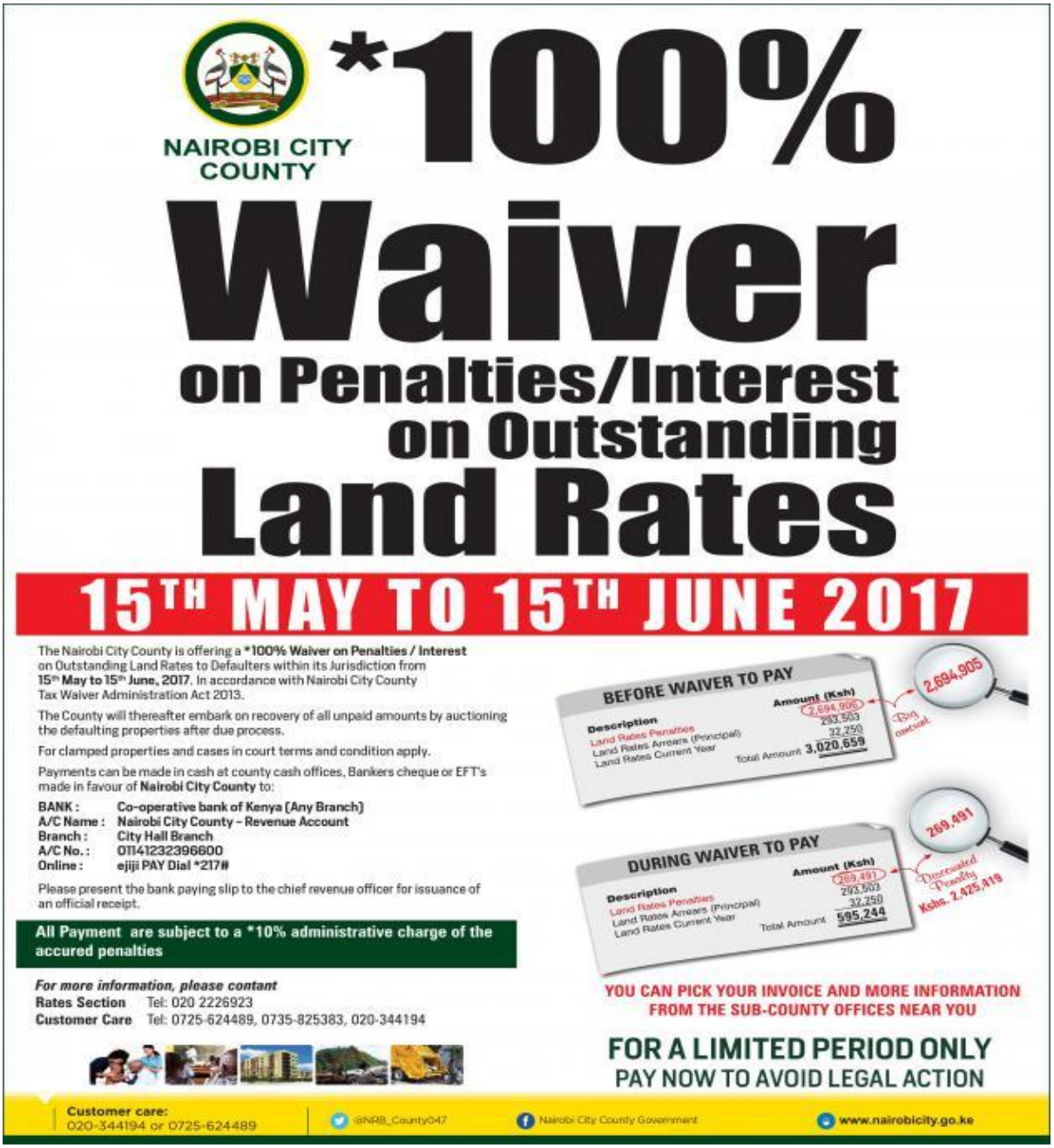
Appendix G : Data on development from site inspection of Kilimani area

	User	Area (sq.m.)	type of development	No. of units
1	Residential	6460	house	1
2	Residential	400.2	houses	4
3	Residential	4479	house	1
4	Residential	4394	Apartments	45
5	Residential	3909	houses	2
6	Residential	3925	house	1
7	Residential	3041	houses	2
8	Residential	3966	Apartments	40
9	Residential	2875	Apartments	24
10	Residential	2104	houses	2
11	Residential	2500	houses	2
12	Residential	1595	apartments	30
13	Residential	748	vacant plot	0
14	Residential	6697	town houses	21
15	Residential	824	house	1
16	Residential	205	apartments	24
17	Residential	1042	houses	2
18	Residential	1125	house	1
19	Residential	868	house	1
20	Residential	3557	apartments	50
21	Residential	307	vacant plot	0
22	Residential	1336	house	1
23	Residential	3779	house	1
24	Residential	195	house	1
25	Residential	200	house	1
26	Residential	1783	houses	3
27	Residential	1754	vacant plot	0
28	Residential	3982	vacant plot	0
29	Residential	1998	vacant plot	0
30	Residential	4050	apartments	30
31	Residential	6750	apartments	45
32	Residential	2403	houses	8
33	Residential	9031	apartments	50
34	Residential	3758	maisonettes	12
35	Residential	3855	house	1

36	Residential	4021	vacant plot	0
37	Residential	3321	Apartments	24
38	Residential	3850	Single house	1
39	Residential	3985	Apartments	45
40	Residential	4884	vacant plot	0
41	Residential	4519	apartments	30
42	Residential	2835	town houses	15
43	Residential	3037	maisonettes	10
44	Residential	978	house	1
45	Residential	2023	house	1
46	Residential	529	town houses	3
47	Residential	1179	houses	2
48	Residential	1469	vacant plot	0
49	Residential	2164	houses	2
50	Residential	464	house	1
51	Residential	302	vacant plot	0
52	Residential	1105	vacant plot	0
53	Residential	1337	apartments	18
54	Residential	210	houses	2
55	Residential	618	house	1
56	Residential	374	vacant plot	0
57	Residential	9282	vacant plot	0
58	Residential	1932	apartment	16
59	Residential	854	house	1
60	Residential	4047	apartments	24
61	Residential	302	house	1
62	Residential	1960	maisonettes	10
63	Residential	1968	apartments	24
64	Residential	4045	vacant plot	0
65	Residential	4310	house	1
66	Residential	5224	apartments	30
67	Residential	4047	town houses	8
68	Residential	4050	apartments	32
69	Residential	3000	town houses	16
70	Residential	3000	apartments	24

Source: Author’s construct (2018)

Appendix H- Nairobi City Land rates waiver Notice, June 2017



http://www.nairobi.go.ke/home/public-notices/waiver-on-land-rates/ accessed on 17th August 2017

Appendix I: Nairobi City County applicable land rates for 2017

NAIROBI CITY COUNTY

Telephone: +254 20 2224281
web: www.nairobi.go.ke
Facebook:NairobiCityCountyOfficial
Twitter@county_nairobi

City Hall,
P. O. Box 30075-00100,
Nairobi,
KENYA.

IN PURSUANT TO THE NAIROBI CITY COUNTY REVENUE ACT 2016, NOTICE IS HEREBY GIVEN THAT:

1. The Nairobi City County shall levy the under mentioned **Rates for 2017,** which becomes due on 1st January, 2017 and are payable at City Hall, through ejiji pay, or to our authorized bankers by 31st March 2017. Any Rates remaining unpaid after this date will incur interest in accordance with paragraph 4 below. Rates are a debt to the County and whilst every effort shall be made to deliver demand notes to every rateable property owner, failure to receive the same shall not be held to absolve the debtor from any liability and penalty for rates remaining unpaid after 31st March 2017.

2. The General revised Rates struck of 25% of Unimproved Site Value of land as appearing in the 1982 Valuation Roll shall apply in all cases except for 3 below as follows:

LAND RATES

Private & public valuation plots

Residential Plots	25%	of	USV
Commercial Plots	25%	of	USV
Agricultural Plots	25%	of	USV
Industrial Plots	25%	of	USV

3. And in addition and in accordance with the Nairobi City County Finance Act of 2013, rates in the following county areas shall be levied on flat rate basis:

A. NORTHERN ZONE	B. EASTERN ZONE
Kamuthi Farmers	Buru Buru Farmers
Jua Kali (Kahawa West)	Kamulu
Kamae	Ngundu Farmers
Giathieko	Embakasi Ranching Co.
Githurai	Mihango
Drumvale Company	
Ruai	

C. SOUTH EASTERN ZONE	D.WESTERN ZONE
Areas Adjoining, Jomo Kenyatta International Airport	Dagoretti Division

THE FLAT RATE FOR THE AFFECTED AREAS ARE AS FOLLOWS:

i) Land parcels not exceeding 0.1 Ha	Kshs.1,000/= per plot per year
ii) Land parcels 0.1Ha-0.2Ha	Kshs.1,200/= per plot per year
iii) Land parcels 0.2Ha-0.4Ha	Kshs.1,500/= per plot per year
iv) Land parcels of above 0.4 Ha	Kshs.1,700/= per acre per year
v) Residential plots	Kshs.1,000/= per plot per year
vi) Commercial/Industrial plots	Kshs.1,500/= per plot per year

4. In compliance with the Nairobi City County Revenue Act of 2013, interest shall be charged and become payable at the rate of 3 per centum on any rates levied as afore-said and remaining unpaid after 31st March, 2017 and for the purpose of this resolution a part of a month shall be reckoned as one month.

DR. ROBERT K. AYISI MBS
AG. COUNTY SECRETARY

Source- http://www.nairobi.go.ke/home/public-notices/

Accessed on 27/2/2017

Appendix J: Nairobi city County public notice for property owners to provide property information

NAIROBI CITY COUNTY

Telephone: 2224281
Web:www.nairobicity.go.ke

City Hall
P. o box 30075-00100
Kenya
Nairobi

OFFICE OF THE GOVERNOR
COUNTY SECRETARY AND HEAD OF COUNTY PUBLIC SERVICE

PUBLIC NOTICE 12th October 2016

TO ALL PROPERTY LAND OWNERS

The Nairobi City County is running a Rapid Results Initiative (RRI) aimed at capturing all properties /land in its Valuation Roll. The intiative runs for 100 days between 20th September 2016 to 29th December 2016.

All property owners are encouraged to take advantage of this initiative whose benefits include:

- Enhanced security of land tenure.
- Access to credit facilities.
- Ease of official land transactions.
- Ease of land development processed.
- Avoid accumulation of penalties and debts on land.

REQUIREMENTS

Property /land owners should present the following documents to the office of the Director – Valuation & Property Management (4th floor Eastern Wing City Hall) for implementation.

- Copy of Certificate of lease/title.
- Original official land search
- Copy of National Identity Card.
- Copy of PIN Certificate.
- A recent passport size photo.
- Copy of Valuation fee payment receipt.

S.G.MWANGI LS (K)
CHIEF OFFICER-LANDS

Appendix K: Nairobi City notice of appointment of Valuers for draft Valuation roll 2016

11th November, 2016 THE KENYA GAZETTE 4525

GAZETTE NOTICE NO. 9318

THE RATING ACT (*Cap.* 267)

THE NAIROBI CITY COUNTY

APPOINTMENT OF VALUERS

IN EXERCISE of the powers conferred by section 7 of the Rating Act and by the approval of Nairobi City County Executive Committee at its 73rd Meeting held on 7th September, 2016 *vide* County Executive Committee Memorandum No. 31 of 2016 the Nairobi City County Government appoints the following contracted private Registered Valuers and County's Valuers listed below to undertake the exercise of preparing the Draft Valuation Roll 2016:

George N. Njuguna (Prof.) ID/No. 11594726

Grace Wakaba ID/No. 3356242

Peter K. Kimeu ID/No. 9709863

Nicodemus K. Kimeu ID/No. 10925684

Cyrus Kariuki Kanyi ID/No. 3612266

John Mulwa ID/No. 8994395

Zachariah Makenzi Ndeti ID/No. 1006111

Owiti Abiero K'Akumu (Dr.) ID/No. 9759270

Frank N. Nzioka ID/No. 8365946

Gyneth K. Magiri ID/No. 13402305

Isaac N. Nyoike ID/No. 11748588

This public notice supersedes all other public notices on this subject matter.

Dated the 4th November, 2016.

ROBERT K. AYISI,

Ag. County Secretary,

MR/2477718 *Nairobi City County*

Appendix L: Nairobi City public notices on preparation draft Valuation roll 2016

THE KENYA GAZETTE
Published by Authority of the Republic of Kenya
(Registered as a Newspaper at the G.P.O.)

Vol.CXVIII-No.138

Page. 4524

11 November, 2016

GAZETTE NOTICE NO. 9314

THE VALUATION FOR RATING ACT

(*CAP*. 266)

THE NAIROBI CITY COUNTY

PREPARATION OF THE GIS BASED DRAFT VALUATION ROLL 2016

IN EXERCISE of the powers conferred by section 3 of the Valuation for Rating Act and by the approval of the Nairobi City County Executive Committee at its 73rd meeting held on 7th September, 2016 *vide* County Executive Committee Memorandum No. 31 of 2016, the Nairobi City County Government gives notice that the above mentioned Draft Valuation Roll is under preparation and will cover all rateable properties within the jurisdiction of the County.

Dated the 4th November, 2016.

ROBERT K. AYISI,

MR/2477718 *Ag. County*
Secretary, Nairobi City County.

PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER, NAIROBI

THE KENYA GAZETTE
Published by Authority of the Republic of Kenya
(Registered as a Newspaper at the G.P.O.)

GAZETTE NOTICE NO. 9315

THE VALUATION FOR RATING ACT

(*CAP*. 266)

THE NAIROBI CITY COUNTY

TIME FOR VALUATION

IN EXERCISE of the powers conferred by section 2 of the Valuation for Rating Act and by the approval of the Nairobi City County Executive Committee at its 73rd meeting held on 7th September, 2016 *vide* County Executive Committee Memorandum No. 31 of 2016, the Nairobi City County Government adopts the time of Valuation for the purpose of preparation of the Draft Valuation Roll 2016 as 27th June, 2016.

Dated the 4th November, 2016.

ROBERT K. AYISI,

MR/2477718 *Ag. County*
Secretary, Nairobi City County.

PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER, NAIROBI

Appendix M: Research clearance from University of Nairobi

UNIVERSITY OF NAIROBI
School of the Built Environment

DEPARTMENT OF ARCHITECTURE & BUILDING SCIENCE
E- mail: architecture@uonbi.ac.ke

P.O. BOX 30197,
Nairobi, Kenya
Telephone: 2724528
Telegrams: Varsity

Ref: UON/CAE/ABS/ST

Date: 8th January, 2016

The Executive Secretary
National Council for Science & Technology
P.O. Box 30623-00100
Utalii House
NAIROBI

Dear Sir,

RE: RESEARCH CLEARANCE FOR PhD IN URBAN MANAGEMENT STUDENT – NYABWENGI LUCY – B80/50148/2015

As part of attainment of PhD in Urban Management, the University of Nairobi, Department of Architecture and Building Science requires candidates to conduct field research.

The above named student will be carrying out her research from February to July, 2016.

I am kindly requesting your authority to enable her undertake her research for her project entitled "***An Assessment of Equity in Local Government Taxation in Kenya: Case Study of Nairobi***"

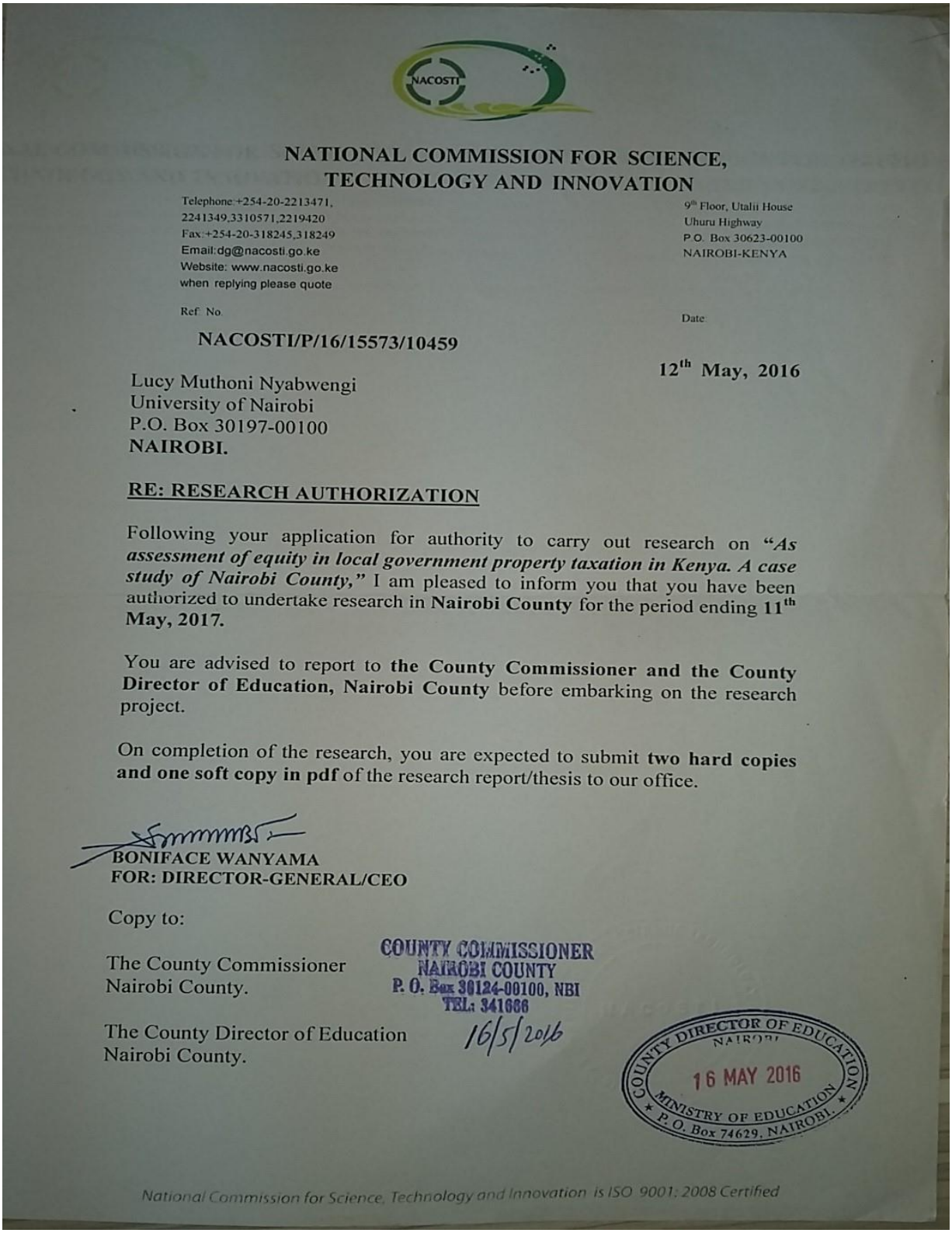
Yours faithfully,

CHAIRMAN
DEPARTMENT OF ARCHITECTURE
& BUILDING SCIENCE
UNIVERSITY OF NAIROBI

Arch. Musau Kimeu
AG. CHAIRMAN,
DEPT. OF ARCHITECTURE & BUILDING SCIENCE

/ang

Appendix N: Research permit from NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471, 2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

NACOSTI/P/16/15573/10459

Date:

12th May, 2016

Lucy Muthoni Nyabwengi
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"As assessment of equity in local government property taxation in Kenya. A case study of Nairobi County,"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **11th May, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341666
16/5/2016

The County Director of Education
Nairobi County.

COUNTY DIRECTOR OF EDUCATION
NAIROBI
16 MAY 2016
MINISTRY OF EDUCATION
P. O. Box 74629, NAIROBI.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix O: Research authorization from NCC

NAIROBI CITY COUNTY

Telephone: +254 20 2221349
Web: www.nairobi.go.ke

City Hall
P .o. box 30075-00100
Nairobi
Kenya

DEPARTMENT OF HUMAN RESOURCES DEVELOPMENT

Ref: HRD/3/4/939/2016
DATE; 23RD MAY 2016

LUCY MUTHONI NYABWENGI

UNIVERSITY OF NAIROBI
P.O BOX 30197
NAIROBI

RE: RESEARCH AUTHORIZATION

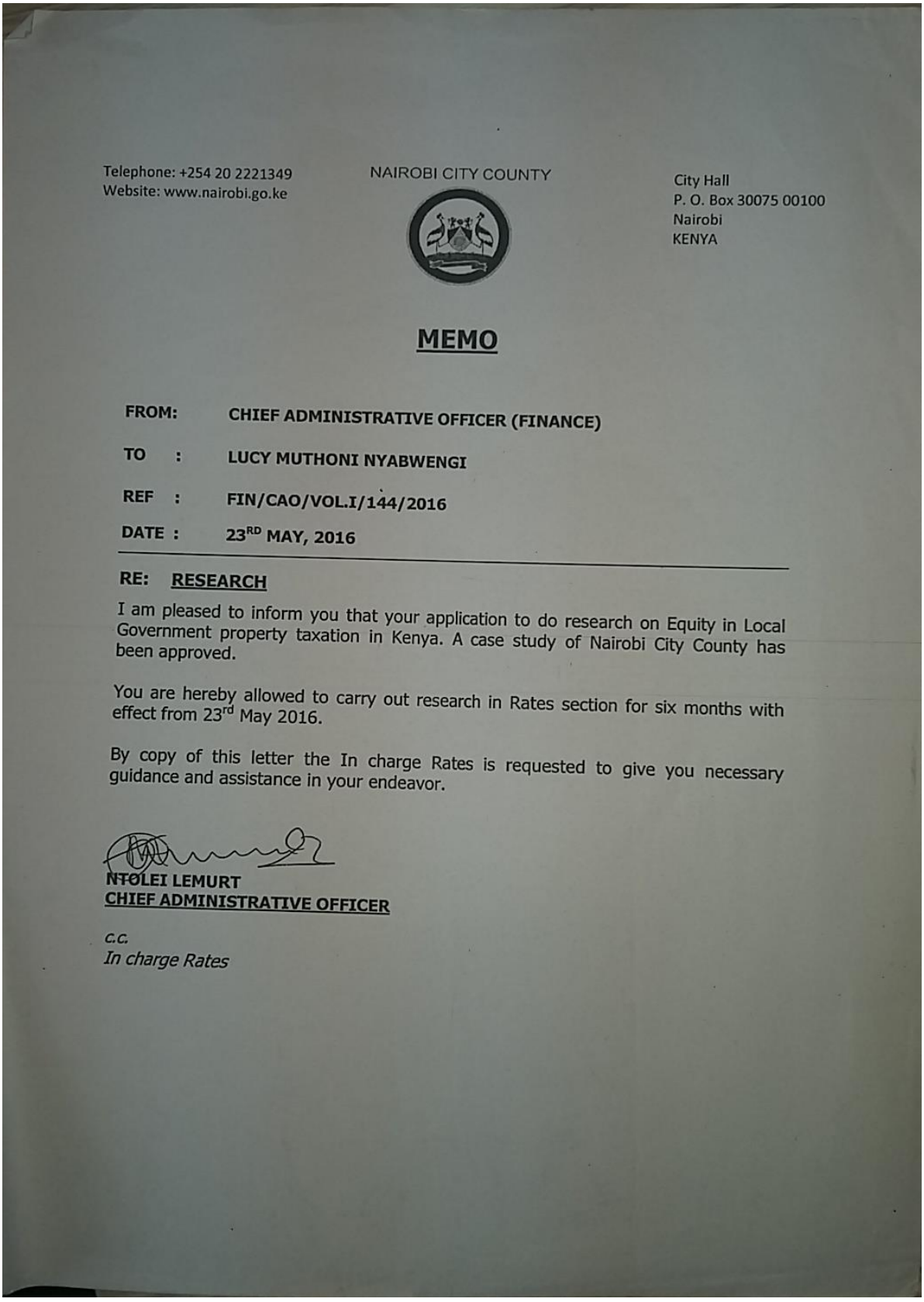
Reference is hereby made to your application letter dated 12thMay 2016 on the above subject;
The Nairobi City County has approved your request subject to the following;

1. The period of research will be effective from 23rd May 2016 for Six months.
2. You will be attached to **Finance Rates**
3. You are expected to adhere to the rules and regulations pertaining to your research.
4. That during your research there will be no costs devolving on the County.
5. That you undertake to indemnify the County against any claim that may arise from your research study.
6. You are required to submit a copy of the final research document to the Human Resource Development Department one week after completion.
7. Research will be on **"As assessment of equity in local government property taxation in Kenya. A case study of Nairobi City County."**
8. You are supposed to pay research fee of Ksh. 5,000/=

Please report to the **Chief Administrative Officer**; Finance -Rates for assignment of duties.

CHARLES CHOI
FOR: DIRECTOR HUMAN RESOURCE DEVELOPMENT

Appendix P: Research approval from NCC



Telephone: +254 20 2221349
Website: www.nairobi.go.ke

NAIROBI CITY COUNTY

City Hall
P. O. Box 30075 00100
Nairobi
KENYA

MEMO

FROM: **CHIEF ADMINISTRATIVE OFFICER (FINANCE)**

TO : **LUCY MUTHONI NYABWENGI**

REF : **FIN/CAO/VOL.I/144/2016**

DATE : **23RD MAY, 2016**

RE: RESEARCH

I am pleased to inform you that your application to do research on Equity in Local Government property taxation in Kenya. A case study of Nairobi City County has been approved.

You are hereby allowed to carry out research in Rates section for six months with effect from 23rd May 2016.

By copy of this letter the In charge Rates is requested to give you necessary guidance and assistance in your endeavor.

NTOLEI LEMURT
CHIEF ADMINISTRATIVE OFFICER

c.c.
In charge Rates