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## Challenges Associated with the Use of ICT in the Collection of Tenement and Property Rating in Lafia, Nasarawa State

<sup>1</sup>M. Adamu Keffi, <sup>2</sup>Ibrahim Bala, <sup>3</sup>Baba Ibrahim Onwana

<sup>1</sup>Department of Estate Management and Valuation, Isa Mustapha Agwai 1 Polytechnic Lafia, Nasarawa State.

<sup>2</sup>B26 Landmark Plaza IBB Way, Maitama FCT Abuja.

<sup>3</sup>Office of the Director of Lands, Department of Land Administration, AGIS, FCTA. Abuja  
adamukeffiedu@gmail.com

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**Abstract:** *The aimed of this paper is to explore the challenges associated with the use of ICT in the collection of tenement and property rating. The study adopt survey design using quantitative approach and data were collected through questionnaires survey from professionals and also the study adopted purposive sample random sampling technique and SPSS tool version 22 was used for data analysis and the results were presented in table. The study indicates that poor infrastructure, high cost of ICT system, slow decision making and poor management Planning ranked 1<sup>st</sup> to 4<sup>th</sup> respectively. The study revealed that social and administrative challenges are limited digital literacy, corruption; potential for manipulation and fraud in electronic systems if proper safeguards are not in place, transparency and trust, resistance to change and unequal access to technology and digital literacy, hindering online participation ranked 1<sup>st</sup> to 5<sup>th</sup> respectively. Then the results also shown that the economic challenges are sustainability to technological advancements and changing regulations, potential job displacement, Cyber security and data privacy concerns, cost of implementation, maintenance and affordability for users ranked 1<sup>st</sup> to 5<sup>th</sup> respectively. The study concluded that the challenges associated with the use of ICT in the collection of tenement and property rating in the study area were poor infrastructure, High cost of ICT system, slow decision making and poor management Planning were found to be moderate technical challenge. The study recommended that the government should invest in improving internet connectivity throughout Lafia to ensure reliable access for data collection and management. This could involve expanding fiber optic networks, increasing the availability of Wi-Fi hotspots, and subsidizing internet costs for relevant authorities.*

**Keywords:** challenges, ICT, collection, tenement, property, rating

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## INTRODUCTION

In Nigeria tenement rate was changed from tenement rate in the 1999 Constitution of the Federal Republic of Nigeria as amended to land use charge by the state legislature. Due to government inefficiency, a lack of human ability to handle land-based taxes effectively, and an excessive reliance on non-land-based incomes like personal and corporate taxes, most developing countries still struggle with the administration of their property taxes (Onwuanyi, 2020). Today, land is viewed as a country's most precious resource and the foundation for all other physical and digital developments (Onwuanyi, 2020). Therefore, the sustainable growth in terms of tenement and property rating will be the result of efficient, economical, and effective land management (Umenweke & Asomadu, 2022). The importance of effectively administered property rating system cannot be over emphasized as it is capable of eradicating poverty, and so, it must not be taken with levity (Oyekanmi, 2022). Property rating practice (PRP) also called tenement rate is essentially a tax levied annually on real property (land or building) for the purpose of maintaining and upgrading the quality of the living environment in terms of sanitation, neighborhood facilities provision, and others services (Baba *et al.*, 2017). The levy is directly charge on the market rent or income derived from the property but is not levied on individual (Abbott, 2008). The tax is termed 'ad valorem tax' in that the determination of the tax liability is based on the value of the property (Jacobus, 2010). Rating is administered within the domain of local government, thus it constitutes a fundamental source of internally generated revenue (Baba *et al.*, 2018).

The current tenement and property rating system in Nigeria faces several challenges that hinder its effectiveness and efficiency. These challenges can be broadly categorized as: The reliance on manual data collection methods often leads to inaccurate and incomplete information about tenements and properties. This can result in under-valuations and missed revenue for the government (Onwuanyi, 2020; Nnamani, Ifeanacho, Onyekwelu & Ogbuefi, 2023). Okunogbe and Santoro (2023) display that the manual processing of property valuations and bill generation is time-consuming and prone to delays, leading to frustration for both property owners and government officials, also the manual system is susceptible to corruption and fraud, as opportunities exist for manipulation of data and valuation assessments. Adeogun, Shittu and Durosinmi (2020) examining the Dynamic Trends in Variation of Property Tax Liability and Value of Ratable Hereditaments in Selected States in Nigeria. The study revealed that income level, property value and property location significantly influenced the rate of default, and rising in awareness of property tax is recommended. Balogun (2019) studied assessment of property tax administration in Edo State, Nigeria; the study found that property tax revenue if ineffective as a result of lack of systematic tax administration procedure, thus resulting to failure of property tax in enhancing internally generated revenue in the study area. However, none of the aforementioned studies attempt to measure the application of ICT in collection of tenement and property rating

system in Lafia Nasarawa State. Therefore, this study bridges a gap by assessing the challenges associated with the use of ICT in the collection of tenement and property rating in Lafia, Nasarawa State.

## **LITERATURE REVIEW**

### **Property Rating and Taxation System**

The property rating is a form of tax levied on real property and it is normally charge at local level for raising the revenue to carry out specific developmental projects. These rates are levied annually on occupiers of landed property. It is charge on the annual value of occupation of the tenement and should reflect the income earning capacity of the built up landed property. Historically, rating system has its origin in the poor Relief Act, 106 generally referred to Britain as “the statute of Elizabeth”. This system inherited from Britain in 19<sup>th</sup> century has been recognized as a potentially rich source of raising fund within a local government area for the purpose of providing and maintaining essential services and amenities in the rating area such as roads, market squares, motor parks, and communal halls are maintained through communal efforts (Hou, 2020). Property tax is a form of tax that is levied by the Local government in order to ensure the sustained provision of certain services which are enjoyed by all. This source of revenue forms a substantial part of government revenue world over. In the United Kingdom and Nigeria, this form of tax is referred to as property rating, in Germany, Austria and the Netherlands it is referred to as property tax while in Estonia, Georgia and in Hungary it is known as land tax (Hlengwa, 2020).

Real Estate Encyclopedia defined rating as the valuation done to ascertain rate payable on a property. It is also known as an assessment tax which is paid for the services made available by the Local authorities. The process of rate collection is kick started with the determination of the values of hereditament. This is carried out in accordance with the provision of statutes. Carrillo, Castro and Scartascini (2021) pointed out that this rate is paid by the owners of the properties rather than the occupier. Where the property is not in occupation, empty rate is chargeable. A general rate is expected to be fixed by the rating authority for all hereditaments within a particular rating area. This value is a fair reflection of the value of those hereditaments in their present state. In the event where some properties were not captured in an earlier assessment, there is a statutory provision for them to be included via toning of list.

### **Overview of Property Tax**

Property tax has to do with establishing a value that should be charged by the government on citizens for the use of infrastructures and services that have been made available. This rate is charged for the upkeep of the infrastructures. It is important that its assessment be comprehensive and consistent (Chaudhary, 2019). Depending on the prevailing provisions of the law, a number of methods are available in arriving at the market value of rateable hereditament. However, Kitchen, McMillan and Shah (2019) posited that there are two basic and widely accepted

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approaches of assessment; these are area-based assessment and value-based assessment. Taxation in general, is an important conduit to generate revenue and also a tool to redistribute wealth. It can act as a tool to manage land use, urban density and expansion, speculations, economic cycles and transactions. Nowadays, property taxation is more important than ever, especially because a great number of countries are not able to finance their selves. Therefore, their first course of action is to establish new taxation measures (most of the times not affordable) on properties. This paper aims to examine the property taxation concept from a philosophical point of view. The writer is focusing on Aristotle's work 'Politics' and others. According to Aristotle, property forms part of the household; consequently, the art of acquiring it, forms the basis of managing the household. Household is made up of freemen and slaves. He asserted that no person can live well, unless provided with necessities. Furthermore, basing on Aristotle, a person who owns property has psychological satisfaction, for it fulfills the human instinct for ownership and possession. Aristotle's view was against communism ownership of property, for he argued that, property is significant to individuals producing it; as such, necessary to the entire society. This means, in order to acquire property, a person must have shelter, be clad and must eat. Property is not the same as wealth is a by product of wealth. One needs to have property to generate wealth. Aristotle affirms that the art of acquiring wealth is a total distinct art from acquiring property. Wealth is a constituent of a household (Hughes, Sayce, Shepherd & Wyatt, 2020).

According to his philosophical point of view, Aristotle regards the whole system of governance as a single entity entitled to oversee the existence of democracy and the rule of law. As a result, he advocates, for the elimination of sleaze in the system and adherence to democracy to ensure the ruled, and the poor gets the maximum out of the system. For this reason, Aristotle considers property as the focal point for ensuring the prevalence of both democracy and the rule of law in any state. This is achieved by ensuring there is equality in administration of power. The poor should not feel marginalized by the few rich or oppressed with heavy taxation burden (Coote, 2021). He exemplifies that as part of a household, property should have a manager within the circles of the state. Furthermore, Aristotle views property as a significant factor that has a lot of importance to the development of a state. This is also true to the modern societies and economies when trying to develop a sophisticated economic system.

### **Property Rating Administration around the World**

Monkam (2010) in his working paper to ascertain the administration of property related taxes in selected Francophone African Nations (Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Madagascar, Mali, Mauritania, Rwanda, and Senegal.). He established that property taxation are restricted to city centers usually capital cities where the enforcement of land tenure is better practiced. This he attributed to customary land tenure system that exists in some of the countries where local chiefs, heads of families and villages are custodians of land. The central government in those Nations do little as regards having an encompassing land tenure system. Rural councils are charged with the

responsibility of allotting land to people who would put them into gainful use in accordance to their custom (Carrillo *et al.*, 2021).

Due to their colonial histories, Francophone nations operate a property tax administration system similar to those of the French and Belgian. In Burkina Faso, taxes are levied on the occupation and use of public land (“taxe de jouissance”) and on rental income from buildings and unimproved properties (“impôts sur les revenus fonciers”). In Mali, taxes are levied on gross rental income and profits. Monkam (2010) identified that the utmost issue of concern for Francophone nations in rating administration is their inability to properly assess properties i.e. choosing an equitable rating assessment regime in which property rating burden will be fairly distributed. As postulated by Franzsen *et al.* (2008), this assessment may be based on the size of the property or on the value of the property (Annual or rental values). Assessments such as these can only be carried out by skilled Estate Surveyors who are insufficient in most of these countries. Assessment would prove a futile exercise if collection is not properly carried out. Tax evasion and avoidance is a common feature in Francophone nations and a significant proportion of revenue is forfeited due to the ineffectiveness of mechanism to enforce the payment on the part of rating administration authorities. Other issues identified by Monkam (2010) associated with the administration of property rating in Francophone nations include: inadequacy of both human and financial resources, influential people such as political and religious leaders tend to use their influence to exclude their properties from being taxed, rate payers usually withhold relevant information about their properties from rating officers and identifying owners of unimproved property is usually a difficult task

### **Evolution of Information and Communication Technology in Nigeria**

Information has always played a very important role in human existence. However, in the mid-20th century, the role of information increased immeasurably as a result of social progress and the vigorous development in science and technology. In addition as Ogar and Dushu (2018) has pointed out, rapid expansion of a mass of diversified information is occurring, which has received the Name “informant explosion”. As a result, the need has arisen for a scientific approach to information and elucidation of its most characteristic properties which led to two principal changes in interpretation of the concept of information. Firstly, it was broadened to include information exchange not only between man and man but also between machine and machine, as well as the exchange of signals in the animal and plant worlds. The pace of change brought by new technology had a significant effect on the peoples live, work and play worldwide, new and emerging technologies challenges the traditional process of teaching and learning, and the way education is managed. Easy worldwide communication provides access to a vast array of data, challenging assimilation and assessment skills. Rapid communication plus increased access to IT in the home, at work and in educational establishment could mean that learning becomes a truly lifelong activity i.e. an activity in which the pace of technological changes force constant evaluation of the learning process itself. Communication can be described as the process of

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transmitting and receiving ideas, information and messages, information and communication technology (ICT) may be viewed in different ways. The World Bank defines ICT as “the set of activities which facilitate the electronic means the processing, transmission could display of information” Owolabi and Olufemi (2018) “refers to technologies people use to communicate through computer and computer networks.

## **METHODOLOGY**

For the purpose of this paper, descriptive survey design was adopted because it uses the approach involves the generation of data in quantitative. Therefore, the population of this study include staff of ministry of Lands and Urban development Lafia, land officers (Estate Surveyors and valuers) working in the said ministry’s property rating unit. The sample frame consists of one hundred and twenty six (90) staff working in the said ministry. (Ministry of lands and Urban development Lafia, Nasarawa state, 2021). Therefore, the study adopted purposive random sampling method in selecting the respondent from the population. The questionnaires were administered to respondents personally and retrieved after personally after a reasonable period. The analysis was being conducted based on the types of research question using descriptive.

## **RESULTS**

The ranks were therefore numbered from level one (1), the lowest level, to level five (5), the highest level. The following interval decisions were derived using the mean score decision interval used in this study, which was modified based on the works of Ramli, Mohamed, Abdullahi, Jaafar, and Lazim (2017). (1-1.80) = Very less (1.81-2.60) = Less (2.61-3.40) = Moderate (3.41-4.20) = High (4.21-5.0) Very high.



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Table 1: Challenges associated with the use of ICT in the collection of tenement and property rating.

<b>Challenges</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Ranking</b>	<b>Remark</b>
<b>Technical Challenges</b>				
Poor infrastructure	2.91	1.32762	1	Moderate challenge
High cost of ICT system	2.88	1.26341	2	Moderate challenge
Slow decision making	2.84	1.32117	3	Moderate challenge
Poor Management Planning	2.69	1.21953	4	Moderate challenge
Incompetency of consultant's technical personnel	2.59	1.21655	5	Less challenge
<b>Social and administrative challenges</b>				
Limited digital literacy	3.01	1.13866	1	Moderate challenge
Corruption; potential for manipulation and fraud in electronic systems if proper safeguards are not in place	2.99	1.21080	2	Moderate challenge
Transparency and trust	2.98	1.18596	3	Moderate challenge
Resistance to change	2.86	1.22326	4	Moderate challenge
Unequal access to technology and digital literacy, hindering online participation	2.84	1.27547	5	Moderate challenge
Limited awareness among property owners about the benefits of online payments and electronic assessments	2.64	1.38228	6	Moderate challenge
<b>Economic challenges</b>				
Sustainability to technological advancements and changing regulations	3.02	1.29525	1	Moderate challenge
Potential job displacement	3.02	1.25538	2	Moderate challenge

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Cybersecurity and data privacy concerns	3.01	1.34351	3	Moderate challenge
Cost of implementation and maintenance	2.93	1.37613	4	Moderate challenge
Affordability for users	2.91	1.10463	5	Moderate challenge

Table 1 shows the results of challenges associated with the use of ICT in the collection of tenement and property rating in the study area. The results indicates that poor infrastructure, High cost of ICT system, slow decision making and poor management Planning with mean scores of M= 2.91, STD deviation = 1.32762, M = 2.88, STD deviation = 1.26341, M = 2.84, STD deviation = 1.32117 and M= 2.69, STD deviation = 1.21953 ranked 1<sup>st</sup> to 4<sup>th</sup> respectively. The results also indicates that social and administrative challenges are limited digital literacy, corruption; potential for manipulation and fraud in electronic systems if proper safeguards are not in place, transparency and trust, resistance to change and unequal access to technology and digital literacy, hindering online participation with mean scores of M= 3.01, STD deviation = 1.13866, M= 2.99, STD deviation = 1.21080, M= 2.98, STD deviation = 1.18596, M= 2.86, STD deviation = 1.22326 and M= 2.8, STD deviation = 1.27547 ranked 1<sup>st</sup> to 5<sup>th</sup> respectively. Then the results also shows that the economic challenges are sustainability to technological advancements and changing regulations, potential job displacement, Cyber security and data privacy concerns, cost of implementation and maintenance and affordability for users with mean scores of M= 3.02, STD deviation = 1.29525, M= 3.02, STD deviation = 1.25538, M= 3.01, STD deviation = 1.34351, M= 2.93, STD deviation = 1.37613 and M= 2.91, STD deviation = 1.10463 ranked 1<sup>st</sup> to 5<sup>th</sup> respectively. This finding is agreed with study done by (Boateng *et al.*, 2018) which identified ineffective planning for ICT integration can lead to incompatible systems, data silos, and wasted resources. Also, (United Nations Department of Economic and Social Affairs, 2018) delays in approval and submission of drawings can significantly slow down property valuation and rating procedures. Streamlining the process through online submission systems and faster electronic approvals could lead to significant improvements. This study also agreed with the study conducted by (Heeks, 2010) poor management Planning consideration of user needs and existing workflows during the design phase of ICT solutions can lead to user resistance and a decreased return on investment.

## CONCLUSION

The study concluded that the challenges associated with the use of ICT in the collection of tenement and property rating in the study area were poor infrastructure, High cost of ICT system, slow decision making and poor management Planning were found to be moderate technical challenge. The study also concluded that social and administrative challenges were limited digital literacy, corruption; potential for manipulation and fraud in electronic systems if proper safeguards



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are not in place, transparency and trust, resistance to change and unequal access to technology and digital literacy, hindering online participation were concluded social and administrative challenge. Then the study also shown that the economic challenges are sustainability to technological advancements and changing regulations, potential job displacement, Cyber security and data privacy concerns, cost of implementation and maintenance and affordability for users were concluded moderate economic challenges. The study recommended that the government should encourage the adoption of cloud-based solutions for storing and managing property data. This would enhance data security, accessibility, and scalability compared to traditional on-premise storage methods. The study recommended that the government should explore the potential of integrating Artificial Intelligence (AI) into the data collection process. AI-powered tools can automate tasks like property identification, data extraction from documents, and anomaly detection, improving efficiency and accuracy.

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