



Article

Information Communication Technology and Revenue Generation in Nigeria: A Case Study of Bayelsa State, 2015-2023

Obinna Nwodim, PhD¹, Samuel Chinagorom Williams²

1. Department of Public Administration, Faculty of Social Sciences, University of Port Harcourt.
2. Department of Political Science, Faculty of Social Sciences, Ignatius Ajuru University of Education, Port Harcourt

* Correspondence: -

Abstract: This paper examined the use of information Communication Technology in revenue generation in Bayelsa State, Nigeria from 2015-2023. The objective of the study is to examine to what extent that the government has been able to deploy the use of ICT to enhance revenue generation in a bid raise the needed financial resources to carry out its constitutional responsibility as well as ascertain the challenges faced. This is against the background of the increasing demands from government which necessitates the need to raise more funds and block loopholes of leakages in revenue generation in the State. The Theoretical Framework adopted in the study is the. The study adopted is quantitative and therefore adopted data from official records from the Bayelsa State Internal Revenue Service, for data Analysis and discussion. Based on the data derived the study found out that the use of ICT was novel and that there were significant improvements in revenue generation in the State, despite the reality that there were challenges as a result of the introduction of the new technology. Based on the findings of the study, the paper recommended, amongst others that the Bayelsa State Government should engage on vigorous public enlightenment and sensitization of the tax paying public on the introduction and benefits of the initiative in tax payment.

Citation: Nwodim, O & Williams, S. C. Information Communication Technology and Revenue Generation in Nigeria: A Case Study of Bayelsa State, 2015-2023. Central Asian Journal of Innovations on Tourism Management and Finance 2026, 7(2), 452-467.

Received: 10th Jan 2026
Revised: 21st Feb 2026
Accepted: 14th Mar 2026
Published: 09th Apr 2026



Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

Keywords: ICT; Revenue Generation; Tax; Revenue Service; Bayelsa State.

1. Introduction

The increase in the responsibilities of government has seen the budgets of governments expand annually and so throws up the need for government to evolve mechanisms to enhance its revenue. This is as a result of the reality that revenues are essential to enable government carry out its responsibilities to the citizenry. The method of revenue collection continues to pose a challenge to government as non-compliance to tax laws by individuals and groups has come to characterize governance in most developing countries like Nigeria. Challenges such as tax evasion, inappropriate remittances and corrupt practices by tax officials have created problems of tax leakages and low revenue to government, hence the inability of government to meet its financial obligations.

Another challenge that results to tax evasion is the inability of the relevant agencies to cover the taxable individuals and groups within its tax network. For instance, the largely informal economy which characterizes the Nigerian economy makes it difficult for small businesses and enterprises to be assessed and covered in the tax network and so therefore huge sums of revenue are lost in the process. This also creates a problem for government and results in its inability to meet its financial obligations in the provision of infrastructure for the citizenry. According to Yunana, et al, poor internally generated revenue remains

one of the devastating problems hindering effective and efficient government administration and development in most states of the country and that this challenge has led to the almost collapse of most grassroots government in Nigeria and that the inability of the government to use in sourcing techniques for funds to finance the council through internally generated revenue is a thorn in the flesh of meeting up their constitutional development responsibilities such as the provision and maintenance of social services(education and healthcare), payment of workers' salaries, amongst others [1].

The generation of revenue in a country relies on its capacity to expand the tax both in economic and administrative term. The existence of a gap between what is collected and what is expected to be received by law because of the shortcoming on the part of tax administrators depicts the need for reform in tax administration [2].

As noted by Braimoh and Onuoha in their study of revenue generation and performance in selected local governments in Edo State, Nigeria, observed that despite the numerous sources of revenue available to local government in Nigeria, there is still poor revenue generation outcome [3]. This also applies to the higher levels of government which ultimately constitutes developmental and administrative problems which this study attempts to explore and investigate.

The prevalence of low revenue which constitutes a major development problem is a major factor for this research. Consistent low revenue is characterised by government negligence, tax evasion, avoidance, record falsification, gross inefficiency and leakages. These have hampered the amount of revenue to be realized from tax sources over the years. The incidence of tax evasion and avoidance by tax payers is high, leading to low level of government revenue. Which further reduces the level of government expenditure, culminating into reduction in the income savings and expenditure of households and firms, leading to low level of economic activities and economic -growth [4].

The old fashioned manual way of collecting tax, especially the personal income tax from individuals in the informal sector has also become complex, expensive and inefficient, while those who are willing to pay taxes also find the manual way of filing annual returns and payment of taxes very cumbersome and where possible prefer to evade the process. These challenges have resulted to low revenue generation for the government, which this study has identified as a problem and attempts to investigate. To this end the introduction of a veritable mechanism through the Information, Communication and Technology provides a veritable platform to systematically solve the challenges of the old fashioned and age long process of revenue generation.

Review of Literature

The relevance and importance of Information Communication Technology cannot be overemphasized, especially in this modern age and time that has been revolutionized by the high speed at which information is processed and retrieved. To this end, scholars have bared their minds on its relevance and have carried out diverse studies and at various times on the relevance of Information Communication Technology in the overall development of the society. For instance,

Adewoye and Olaoye, aver that the importance of the IT usage is immeasurable regarding to taxation [5]. According to them, some of the important benefits are: accelerate a reduction in managing the overhead expenditure of government parastatals saddled with tax administration, immediate computation and presentation of tax liability with e-tax calculator, abridged cost of registration of tax payers and prompt generation of TIN, reduced staff-tax payer's conspiracy in tax liability, reduced fraudulent activities of tax collectors as regard to non-transfer of tax acknowledged from tax payers and upsurge of government revenue because of drastic ally decrease in corrupt practices and expenses as overhead transactional, and administrative. Crede and Manselli, assert that ICT has the capability to upsurge productivity and establish additional cost effective output without change in input [6]. Secondly, development of ICT applications usage for business modify the approaches to organizations function which ultimately expand services and products quality. This emphasized that the new opportunities for tax revenue was blown out by the ICT usage in SIBR or FIRS such as new markets, new organization design, improved services, invented or innovated products are all emanated from ICT as innovative sources

of revenue. Owino, et al in Atagboro and Epkulu, applying the correlation research design to examine the impact of implementing an ICT system for single business permits on revenue collection, as well as impact of implementing an ICT system for land rates on revenue collection for property rates on revenue collection and for a bus park on revenue collection in the country, found out that there was almost perfect correlation between the adoption of ICT application and revenue collection with ICT application accounting for as much as 91.9% of the variance in revenue collection efficiency amongst county government and that the statistics demonstrated that using these measures improved the effectiveness of tax collection by county government.

For Adewoye, et al, the expected benefits of employing an ICT system also includes enhancement in productivity, enormous accurateness in information and improvement in profit performance, while Adewoye and Olaoye, aver that productivity progressed in the state that deploys information technology [5][7]. Furthermore, examining the evolution of Information Communication Technology in public sector administration, Lin and Yuan assert that ICT has facilitated government t operations and greatly influenced the way public services are provided. In their study of Information Communication Technology and service delivery in the Federal Inland Revenue Service (FIRS) between 2000 and 2019, Edemidiongm, et al, found out that there was a slight increase in the revenue generated by the Service between 2007 and 2018, but did not meet up with the targets due to the economic recession at the time. They concluded that there was significant relationship between ICT application and tax compliance and acceptability by corporate bodies and that the implication of this conclusion is that the increase in tax return could be context specific and therefore not all tax regions are functional in their tax drive. The study alluded to this by concluding that there exists a weak link among the tax regional offices and that poor internet facilities and infrastructure decay had a negative relationship on the application of ICT in tax administration by FIRS in Nigeria [8].

Owino, et al, examining the influence of Information Communication Technology (ICT) on revenue collection in County Governments in Kenya found out that there is a strong and almost perfect association between ICT systems adopted and revenue collection and that the application of the information, communication technology system explains up to 91.9% variance in revenue collection efficiency and also that application of these systems approved revenue collection efficiency in the county governments [9]. Monica, et al in Atagboro and Akpulu, investigated the extent to which tax payer's familiarity with using computerised tax system affects revenue collection efficiency [10]. The result found out that tax payers agree that they have full access to and control over the tax system and that the study showed that workers proficiency significantly predicated tax collection effectiveness and that a negligible amount of tax payers go online to seek advice on tax difficulties. On his part Mugisha, is of the view that the adoption of ICT augments timely entrance to precise and pertinent information, which is a requirement for good programming, planning, and implementation, including evaluation and monitoring which consolidated to the key factors in tax collection [11]. Examining digital government and public sector management in Nigeria, Olaniyi, posits that the application of ICT in public sector has positive effect and statistically significant effects on its management and that there is a bi-directional causality between ICT and public sector management [12]. According to him, ICT spurs public sector management which in turn, spurs ICT even further.

In their separate studies Amegayi et al, Evans, Karanja et al, found out that the outcome of application of ICT in public sector leads to efficiency of administration and the deployment of the needed infrastructure to drive tax revenue will drive development of infrastructure and improvement of public sector services [13][14][15]. Examining the role and prospering innovation and effectiveness in the administration of taxes and also proper appropriation of Information Communication Technology in national development, Oloruntoyin and Adeyanju, observe that over the past decade, new applications of ICT have improved service delivery, transparency and public access to national development and maintain that it is a unique tool capable of encouraging sustainable economic development in the society [16]. Elsewhere, Enejojo and Gabriel,

studying taxation and revenue generation in selected states in Nigeria examined the extent to which tax revenue generation has contributed towards the economy's total revenue and Gross Domestic Product and the effect of tax evasion and tax avoidance on revenue generation in Nigeria, Findings from the study revealed that taxation has significant contribution to revenue generation, taxation has a significant contribution to Gross Domestic Product (GDP) and tax evasion and tax avoidance have a significant effect on revenue generation in Nigeria [17]. Tax (PPT), company income tax (CIT) and found out that the various income taxes were statistically significant and had a positive relationship with federally collected revenue. Wasao, describes an electronic tax system as an online platform whereby the taxpayer can access through the internet all the services offered by a financial authority such as the registration for a personal identification number, filing of returns and application for a compliance certificate, a perfect example of such system is the electronic taxation system that was rolled out by the FIRS in Nigeria [18].

E-taxation was first introduced in the United States of America (USA) in 1986. The electronic filling was introduced in Australia in 1987 through its modernization programme, while the Canadian taxpayers commenced electronic filling tax return in 1993 through the E Fills. Countries such as Malaysia, Netherlands and the Uganda all introduced the electronic payment of tax payment in 2009. By March 2013, the Egyptian government launched the electronic tax payment system in order to keep pace with the international trades using automated [payments systems, especially for government services (Australian National Audit Office, 2015). However in Nigeria, the Nigerian government introduced the electronic tax system in 2015, when the Federal Inland Revenue Service in collaboration with Inter Bank Settlement System (NIBSS) implemented the technology in the Nigerian tax system [19]. According to Uzochukwu et al, the electronic tax system was introduced by Nigeria Tax Authority to increase financial tax collection, administration, render services to the tax payers all the time from anywhere, reduce cost of compliance and improve tax compliance and that promising many advantages over the traditional method of hard copy tax filing, these systems promise faster process, lower costs and increased efficiency [20]. To them, the FIRS has also provided a centralized Information, Communication Technology (ICT) department that provides support services in terms of electronic system to the entire organization and that all these are done to achieve its goals of increased revenue collection and facilitating voluntary compliance by tax payers. In their study of e-governance and revenue generation and the taxation system in Lagos State, Nchuchuwe and Ojo, aver that the electronic tax system has made it difficult for taxable persons in the state to evade and avoid tax and that the resultant effect is that tax payers now pay the exact amount and as at when due, thereby expanding the statistics of taxable Lagos residents [21]. According to them, e-taxation has enabled the tax authorities to accurately determine the tax rate to be charged on taxable individuals in the State and that with the adoption of the Tax Identification Number (TIN), financial fraud and all forms of unwholesome practices from tax payers and the tax collecting officials has been greatly reduced, thus the digitization of the tax system has enabled the Lagos State Government to maintain and control its offices. They further opine that e taxation system has reduced the non challant and non-compliance attitude of tax payers in fulfilling their tax obligation to the State and that with the introduction of the self-assessment forms, the morale of tax payers are further boosted.

On their part Abdulrazaq, et al in Olaoye and Atiloye, outline elements of electronic tax payment systems in Nigeria as follows [22]:

1. Tax payers in Nigeria pay the following taxes online, eg. Value Added Tax (VAT), Petroleum Profit Tax (PPT), Capital Gains Tax (CGT), and Company Income Tax (CIT) through the online system;
2. More so, tax payers can pay their taxes directly from their various bank accounts and this is achieved by FIRS in conjunction with Nigeria inter-bank settlement System (NIBSS);
3. Tax clearance certificate can now be easily applied for and processed online without having to visit the office of the tax authority;

4. Easy checking and verification of Tax Identification Number (TIN), thereby making the process of deduction of withholding taxes very easy;
5. Electronic exchange of information between tax payers and FIRS official;
6. Charging of fines and fees for lateness: The online system automatically calculate and impose fines, charge and penalties for late submission of tax returns or late payment of taxes.

There is no doubt that the introduction of the Tax Identification Number (TIN) is a major innovation in the restructuring and enhancing efficiency in the revenue generation of government using information communication technology. As a matter of fact, the National Tax Policy Document explained the strategic importance of TIN thus:

The TIN will provide a uniform mode of identification for all tax payers in Nigeria. Government at all levels are therefore enjoined to support the introduction of a uniform system of registration and allocation of TIN and the creation of a data base accessible to all tax authorities (and other Federal, State and Local Government agencies). In the country. This will provide easy and complete access to tax payer information nationwide, which can be achieved in the efficient use of information and communication technology and ultimately reduce the cost of administration and supervision while enhancing higher compliance. The relevant tax authorities and Joint Tax Board should ensure the successful administration of the TIN programme (National Tax Policy, 2012).

However, Okoye and Olayinka, are of the view that the challenges of electronic tax system are measured in terms of the good that come with electronic tax system and that there are challenges in the implementation and maintenance, but that a good tax system will need [23]:

1. A reliable and accessible internet service;
2. Cooperative financial institutions;
3. An IT oriented public, and
4. Adequate financing to set up the appropriate infrastructure in tax offices

In their study of revenue generation through taxation in selected states in Nigeria, Okafor, discovered that electronic taxation will enhance revenue generation in the states studied and that large data base of the citizenry achieved through proper record keeping will enhance revenue generation and that e-government is an indispensable factor in achieving the objective of e taxation [24]. Examining professional perspective of tax evasion in Nigeria Tijani and Ogundeji, found out that tax evasion in Nigeria is largely influenced by complexity in tax structure, received financial and economic benefits associated with tax evasion, and lack of trust in government over financial resource utilization and suggested that there should be adequate implementation of appropriate recommendations made in the study towards enhancing a better tax policy and improved tax administration in the country [25]. Going further to examine factors that influence and result to tax evasion in Gombe State, Nigeria, Manor and Gurama found out that tax system, income level and level of education have significant positive relationship with tax evasion [26]. Adenugba and Ogechi, examining the effect of internal revenue generation on infrastructural development in Lagos State found out that the effect of internal revenue generation has led to infrastructural development of the State and that the workers in Lagos State contribute to revenue generation in the State and also the level of infrastructural development in the State is as a result of adequate generated revenue and revenue generated supports infrastructural development [27]. The study also noted a high level of efficiency in revenue generation in Lagos State and that enlightenment of the citizens on the need to pay their taxes and promptly too, were major strategies adopted by Lagos State government in the improvement of their revenue generation. Dennis and Okoye in Atagboro and Ekpulu, studying the effects of tax income on GDP found out that taxes had a crucial role to play in both the use of government revenue and the expansion of the Nigerian economy [28]. Ifero and Eko investigated tax innovation, administration and revenue generation in Cross Rivers State, Nigeria [29]. The study showed a significant degree of inefficiency in the administration of taxes leading to low revenue generation. The study, therefore, recommended that periodic review and update of tax policy will bring innovation and effectiveness in the administration of taxes, as well

as proper appropriation of tax revenue will drive development in needed infrastructural and social services. In their study of inhibiting factors to tax revenue generation in Cross River State, Nigeria, Eja, et al, found out that there is a negative, but insignificant relationship between lack of infrastructure to real facilities and government tax revenue in Cross River State, Nigeria [30]; there is a negative and significant relationship between tax evasion and avoidance and government tax revenue in Cross River State, Nigeria and also a positive and significant relationship between experienced personnel and government tax revenue in Cross River State, Nigeria. They recommended, amongst others, that government should enhance tax payers morale through the provision of quality infrastructural facilities and other incentives and economic benefit to the tax payers; formulate strategies to reduce tax evasion by strengthening the policy framework and operational guidelines of the Cross River Internal Revenue Service and also adopting an evidence based government spending, which implies that government should spend tax revenue on public goods and productive ventures that that will be of social and economic benefits to the citizenry.

Examining the effect of electronic taxation on revenue generation in Lagos State, Okoye and Olayinka found that e tax payment has a positive and significant effect on revenue generation in Lagos State and that this could be attributed to the convenience electronic payment channels offer to tax payers in terms of place and time and cost [31]. From their findings in their study, they recommended that there should be more awareness on electronic payment of taxes in order to increase the number of those who pay their taxes via the means, amongst others. The study by Olaoye and Atilola, showed otherwise [32]. In their study of the effects of e-tax payment on revenue generation in Nigeria, they found negative results. According to them, e tax filling showed no significant effect. Revenue did not improve as a result of returns being filed electronically. To them, this could be attributed to the errors or misstatement of self-assessment that electronic means promote. They noted that the issuing of electronic tax clearance certificate was also found to improve revenue generated by the State and that this effect is similar to that of electronic payment. To them, this is because tax clearance certificates are issued after tax payments are made. Examining the impact of electronic governance in tax revenue collection and remittance in Nigeria, Oloyede, observed that the migration from manual system of tax collection to the electronic tax process has improved tax system to an extent in Nigeria and that although the implementation has not gone round the entire country, the results from the Federal Internal Revenue Service (FIRS), the Federal Capital Territory (FCT), Abuja and states such as Bauchi, Delta, Ebonyi and Lagos show that the digitalized process can help in the transformation of tax administration in revenue collection and remittance process in Nigeria [33]. She encouraged other States revenue services board that are yet to adopt the e taxation platform to do so as there are enormous advantages as could be seen from these states. Investigating the effects of taxation and the Nigerian economy Uzochukwu, et al., found out that taxation has a positive effect on the economy of the country and that this positive contribution could be due to the ease and flexibility of the tax system which made it easier for taxpayers to be able to pay tax levies [34]. According to them, this could be as a result of the fact that tax payers see it as a means to grow the economy of the country in order for the government to provide the social needs of its citizens. They, therefore, recommended that there is need to balance the system to enhance effective tax revenue generation and that government should make more adequate policies with respect to tax system to enable a high percentage of tax revenue collection which will create more avenues for the government to engage more in the infrastructural development and growth of the country.

Dagwa, et al, examining the impact of revenue generation and utilization on social service delivery in Plateau State, Nigeria found out that revenue generation as a whole has an impact on social service delivery within the period 2006 and 2015 in Plateau State, with a large chunk of the revenue coming from the federation account, capital receipts and other revenues, which are individually not significant in impacting on social service delivery in Plateau State and also found out that revenue generated and allocated to health and education sectors were not adequately utilized in relation to total revenue generated

for the period under study in Plateau State in comparison to recommended standard benchmark [35]. For Owino, et al, in their study of the influence of Information Communication Technology on revenue collection in Kenya, also found out that there is a strong and almost a perfect association which exists between tax systems adopted and the revenue allocation and who also reported that the application of the information communication technology systems explains up to 91% variation in revenue collection efficiency that contribute to the growth of the economy, positively [36]. Gwa and Kase, examined the contribution of tax revenue to the economic growth of Nigeria between 1997 and 2016 [37]. The study revealed that there is a significant contribution of Company Income Tax (CIT and Value Added Tax (VAT) on the economic growth of Nigeria and also that there is no significant contribution of Petroleum Profit Tax (PPT) on the growth of the Nigerian economy. Also examining the impact of tax revenue on the Nigerian economy, Cornelius, et al., found out that there is a significant relationship between Petroleum Profit Tax (PPT) and the growth of the Nigerian economy and that the study further showed that there is a significant relationship between normal revenue and the growth of the Nigerian economy [4]. The findings also revealed that there is a significant relationship between Company Income Tax (CIT) and the growth of the Nigerian economy, Based on their findings, they recommended, amongst others, that government should endeavour to provide social amenities to all nooks and crannies of the country and also that government should engage in complete re-organization of tax administration machineries in order to reduce to tolerable level the challenges of tax evasion and avoidance and finally to enhance the tax base of government, employment opportunities should be created and a good environment for entrepreneurship and innovation to thrive made using tax proceeds. Another Study by Afuberoh and Okoye, also showed significant relationship between revenue generation through taxation and Gross Domestic Product (GDP) [38]. Sun et al, investigating the impact of direct and non-direct tax on economic growth in Turkey found out that indirect taxes had a positive and significant relationship on economic growth, direct taxes had a negative and significant impact on economic growth [39]. It was also found out that increase in direct taxes reduces disposable income, which in turn affects the demand for goods and services, and again leads to reduction in indirect taxes thereby affecting the economy negatively. According to them, personal and corporate taxes collected in Turkey affects the economy negatively, while VAT and Excise Duties affect it positively. On the other hand, Asaolu, examined the relationship between tax revenue and economic growth in Nigeria from 1994-2015 [40]. The study revealed that a significant relationship between Customs and Excise Duties and Value Added Tax with economic growth, a negative significant relationship with economic growth and an insignificant relationship with economic growth.

In their study of internally generated revenue in the local government system and sustainable development programme with regards to improving the sources and utilization of internally generated funds in the local government system in Nigeria, Ibeogu and Ulo, established that inefficient monitoring of revenue officials led to poor revenue generation and that absence or poor entrepreneurial skill among revenue officials brought about inadequate revenue generation capacity of the local government and that the implication of the findings is that the internal sources of revenue to local government are not fully tapped, while the available revenue are not properly utilized in carrying out the constitutional functions of the third tier government [41]. Ebule, examining the relationship between internally generated revenue and performance in the public sector in Obio/Akpor Local Government Area of Rivers State, showed that permits and rates have positive significant relationship with performance of Obio/Akpor Local Government Council [42]. Gomero, found out that there exists a strong positive relationship between the variables with a coefficient of 829 which is also supported by 82.9% of respondents agreeing to the positive effect [43]. According to the findings, revenue authority in Assossa town benefit from information technology support services, and human resources. The study concludes that human resources are positively associated with revenue collecting success and that in order to maintain their service impact on revenue performance, accessibility of training, size of yearly the performance of local government

in Rivers State. Revenue collection, amounts offered to revenue authority in order to improve the enterprises performance and financial sustainability. The study therefore recommended allocating additional human and financial resources to increase the organisation's revenue collection capacity.

Ironkwe and Ndah, examining the impact of internally generated revenue on the performance of local government in Rivers State Found out that tax revenue displayed a positive, but insignificant influence on road construction and maintenance and that notwithstanding the insignificant influence of tax revenue and non-tax revenue are vital ingredients in improving [44]. On their part, Akintoye, et al in their study of determinants of tax revenue in Nigeria identified political instability and absence of violence/ terrorism were found to have positive relationship with tax revenue and therefor advocated the improvement in political stability and eradication of all forms of violence and terrorism in order to improve tax revenue in Nigeria [2]. According to the study, the estimated coefficient of inflation mostly suggests positive relationship with tax revenue. On their part, Uhumwango and Aibiye identifying problems and challenges of revenue generation in local government administration in Nigeria highlighted: macro level of government [45]; failure to remit 10% to local government by state governments, misuse of state might on state joint Local Government Account. Explaining the problem of micro level of government Uhumwango and Aibiye, are of the opinion that internal revenue generation is impaired as a result of the micro-level of governments (Federal and States) holding on to those functions the performance of which yields high revenue returns [46]. Again, failure to remit 10% to local government by State Governments is a major constraint as that consists of a major source of revenue to the local government. In their empirical analysis of e governance and socio economic development of Imo State, Wilson and Anoruo, revealed that e-governance has significant effect on the socio economic development of Imo State in such areas as enhancing faster communication between the government institutions and the citizens, as well as other sectors of the economy in the State; promoting fiscal policies, transparency and accountability on the part of the government for service delivery, promotes e-commerce and trade in the State, creates opportunity for easy access to government policies and information, enhances technological advancement and human capital development in Imo State, among others, identifying challenges such as bureaucracy, inadequate ICT personnel to execute e governance practices, poor technological infrastructure, technological illiteracy, inadequate power supply as challenges faced by e governance in Imo State within the period under study.

Johnson and Omodero in their study of governance quality and tax mobilization in Nigeria found a positive correlation between corruption and Nigeria's tax revenue mobilization. According to them, the control of corruption has a favourable input on the generation of tax revenue in Nigeria and that the study demonstrated that the ability of the government to control corruption and substantially reduce corruption in Nigeria contributes to the improvement of citizen's morale to pay taxes. In order words, the citizens are encouraged to willingly prevent tax noncompliance, thereby increasing tax revenue generation in Nigeria. The study also demonstrated that an increase in government stability (political stability) results in higher tax revenue generation and that political stability has a favourable and substantial link with Nigeria's tax revenue and therefore suggested that a more legitimate and responsive state is likely a necessary prerequisite for a higher level of tax effort in Nigeria.

An overview of the literature reviewed is indicative of the positive developments associated with the application of Information Communication Technology in enhancing the efficiency and effectiveness of collection of revenue. There is no doubt that the application of information communication technology comes with its challenges, empirical research obtained so far reveal that the positives far more outweighs the negatives and they have ultimately made positive development in ensuring that government raised the needed resources to carry out their responsibilities.

2. Materials and Methods

A quantitative research methodology was employed to investigate the influence of Information and Communication Technology (ICTs) on revenue generation in Bayelsa State, Nigeria from 2015 to 2023. A quantitative approach was chosen due to a need to objectively measure trends, associations and quantifiable differences in revenue performance associated with the deployment of ICT. The data for the study were obtained generally from secondary data using records or reports made available by reliable or acceptable government organs, agencies or institutions such as the Bayelsa State Internal Revenue Service. The data had information about annual revenue earned by each of these tax departments themselves, which were extracted and trend analysis was performed to recognize the trend changes before and after the introduction and expansion of ICT-based tax systems. Summary statistics were calculated in terms of revenue over the period of time for which data was available and compared by years between 2 or more within the study period using descriptive statistical techniques. In addition, the methodology involved a longitudinal design meaning that it could measure revenue over several years, indicating whether the adoption of ICT led to higher revenue outcomes. The study also allowed for context through variables such as administrative reforms and technological integration in tax processes that supported interpretation of findings. The data analysis was tabulated to ease the understanding and interpretation of the trend and fluctuations in the revenue generation. Such a method also provided clear, measurable evidence about the impact of ICT on revenue mobilization, as well as aspects of implementation in practice through this framework (Author xx).

3. Results and Discussion

Data Presentation:

Revenue Collected by the Bayelsa State Board of Internal Revenue and other MDA s from 2013-2023

S/N	YEAR	AMOUNT
1	2013	10,500,936,262.88
2	2014	10,958,263,688.12
3	2015	8,744,182,977.24
4	2016	5,631,745,432.04
5	2017	12,528,860, 605.63
6	2018	12,442,021,851.78
7	2019	16,342,762,523.23
8	2020	10,913,223,318.22
9	2021	13,273,991,303.24
10	2022	14,699,411,046.77
11	2023	19, 823, 620,909.83

Source: Researcher's compilation, 2025

The Table above shows that in 2013, 10,500,936,262.88; in 2014, 10,958,263,688.12. In 2015 a total of 8, 744, 182,977. 24 was generated with breakdown as follows: January, 788, 939, 791.00; February, 841,037,856.41, March, 815,445,712.43; April, 600,836, 765.34; May, 1,096,010,093.34, June, 768,521,175.84; July, 817,600,875.75; August, 655,183,350.86; September, 522,608,456.84; October, 766,849,951.63; November, 638,618,880.75638, 618,880.75; December, 432,490,027.08.

In 2016, a total of 5, 631, 745. 432.04 was generated in 2016 with breakdown as follows: January, 707, 913,177.21; February, 466, 945, 217.26, March, records Not Available, April, 517, 354,934.72; May, 719,918,214.11; June, 488,386,838.37; July, 488,386,838.37; August, 736,123,617.13; September, 649,966,232.26; October, 608,935,932.41; November, 981,581,370.16; December, 608,935,932.41.

In 2017, a total of 12, 528, 860, and 605.63 was generated in 2017 with breakdown as follows: January 684, 314,326.53; February, 993,967,890.25; March, 1,128,705,321.11; April, 569,561,460.95; May, 1,275,406,762.18; June, 752,422,047.4872, 898,442.005; July,

868,559,504.85; August, 1,310,336,509.02; September, 2,143,483,809.59; October, 872,898,442.00; November, 768,252,679.34; December, 1,161,351,852.36.

In 2018, a total of 12, 442,021,861.78 was generated internally in the year 2018 with breakdown as follows: January, 1,754,744,171.50; February, 1,115,585,678.41; March, 1,245,152,597.86; April, 590,932,554.28; May, 1,173,863,010.67; June, 1,026,436,706.91; July, 1,017,408,934.61; August, 1,114, 967,259.57; September, 1,066,462,012.58; October, 1,137,850,452.92; November, 1,457,222,205.55; December, 986,395,031.88.

In 2019, a total of 16, 342,762,525.23 was internally generated in 2019 with breakdown as follows: January, 1,099,180,460.14; February, 739,514,798.16; March, ,159,897,632.99; April, 61,042,940.32; May, 910,030,089.95; June, 1,005,852,888.36; July, 882,104,746.57882,104,746.57; August, 926,011,556.97; September, 686,767,699.85; October, 6,109,585,458.00; November, 893,212,045.92; December, 969,562,206.00.

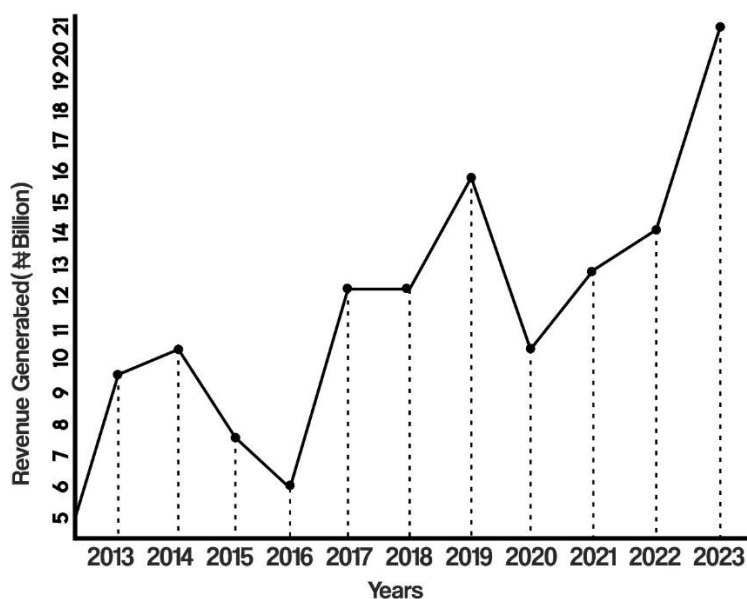
In 2020, a total of 10. 913, 222, 318.22 was internally generated in the year 2020 with breakdown as follows: January, 848,933,649.47; February, 804,550,556.22; March, 1,221,887,714.18; April, 1,383,866,638.41; May, 668,037,599.57; June, 459,048,913.50; July, 436,948,848.69; August, 1,663,524,839.92; September, 839,196,952.88; October, 737,499,493.09; November, 880,220,906.49; December, 969,562,206.00.

In 2021, a total of 13, 273, and 991,303.24 was generated in the year 2021 with breakdown as follows: January, 51,107,171.54; February, 1,019,623,758.20; March, 1,268,895,281.68; April, 1,060,234,084.13; May, 1,102,077,408.32; June, 1,013,375,126.41; July, 1,009,166,093.83; August, 1,156,405,952.80; September, 1,198,062,593.43, October, 953,429,422.57; November, 091,081,919.33; December, 1,450,533,411.00.

In 2022, a total of 14, 699, 411.046 .77 was generated in the year 2022 with breakdown as follows: January, 982, 100, 739.19; February, 1,199,623,983.64; March, 1,229,812,016.44; April, 1,229,812,016.44; May, 1,099,900,129.77; June, 1,125,250,750.63; July, 977,641,333.36; August, 1,192.168,167.36; September, 2,651,200,193.27; October, 1,038,993,959.07; November, 1,294,212,563.22; December, 1,228,274,615.19.

In 2023, a total of 19, 823,620,909.85 was generated internally in 2023 with breakdown as follows: January, 1,093,928, 617.32; February, 3,190,183,855.51; March, 1,482,216,509.83; April, 1,346,073,292.99; May, 1,243,108,541.88; June, 1,219,933,319.34; July, 2,892,215,370.52; August, 1,584,131,879.66; September, 1343, 024,893.14; October, 1,342,840,160.34; November, 1,341,676,477.89; December, 1,744,287,591.43.

Graph illustrating the revenue collected by the Bayelsa State Board of Internal Revenue and other MDAs between 2013 and 2023.



Source: Field work, 2025

The Figure above illustrates the graphical flow of revenue collected by the Bayelsa State Board of Internal Revenue and other Ministries, Departments and Agencies between 2013 and 2023. The graph shows that the revenue collected were as follows: 2013,

10,500,936,262.88; 2014, 10,958,263,688.12; 2015, 8,744,182,977.24; 2016, 5,631,745,432.04; 2017, 12,528,860, 605.63; 2018, 12,442,021,851.78;; 2019, 16,342,762,523.23; 2020, 10,913,223,318.22; 2021, 13,273,991,303.24; 2021, 14,699,411,046.77, while 2023 was 19, 823, 620,909.83.

From the illustration, the years 2013 and 2014 were years when revenue was manually collected. It preceded the deployment and introduction of Information Communication Technology in the collection of revenue. The graph shows the level of inconsistency in the revenue inflow despite the use of technological devices by the various Ministries, Departments and Agencies. However, in spite the level of inconsistency, and fluctuations, the overall flow shows that from 2021 there was an upward flow, indicating an improvement in the revenue generation effort by the Bayelsa State Board of Internal Revenue. The implication of this trend is that there is a positive prospect over the use of Information Communication Technology in the collection of revenue in Bayelsa State.

Discussion and Findings:

Over the years, successive governments have been faced with the challenges of collection of revenues to carry out their responsibilities to the citizenry. In the face of these challenges, their responsibilities continue to increase and become complex, hence the need to adopt better and more efficient strategies to achieve their objectives.

A summary of the internally generated revenue collected by the Bayelsa State Board of Internal Revenue within the period under study indicated that in 2017 a total of 12, 528, 860, 605.36 was collected; in 2018, a total of 13, 636, 545, 716.76 was generated ,; in 2019, a total of 15, 373,200,326.23 was generated; in 2020, there was a remarkable decline in revenue generation in the State as a result of the global COVID 19 pandemic that ravaged the world necessitating a global economic meltdown. This year, the total internally generated revenue was 9, 943, 660,112.22. In 2021, the figure increased to 13, 273, 992, and 303. 84; in 2022, it was 15,699,411, 046.77 and in 2023, the internally generated revenue increased to 19, 823,620, 909.85.

There is no doubt that there was significant increase in the revenue collection internally in the State during the period under review. The data showed that as the years progressed, loopholes that created room for wastages and non-remittances of internally generated revenue in the State were blocked, necessitating the yearly increases recorded. Apart, from the decline in 2020, which as already stated was as a result of the health pandemic that ravaged the world, in which most economies were locked down, each passing year, witnessed improvements. It shows that there is a great prospect in improved revenue collection using information, communication technology.

From the data obtained, the Bayelsa State Government through the Board of Internal Revenue has various sources of revenue. These comprises the Ministries, Departments and Agencies of Government. The initiative of deploying Information Communication Technology in revenue collection in the State was basically introduced between and 2016 in the various Ministries, Departments and Agencies Prior to this time, revenue collection in the State was manually and physically done through direct cash collection and physical payment of money to these agencies. This, however, posed great challenges as the cumbersome nature of revenue collections was such that made tax evasion in the State inevitable. It was also difficult to bring in a number of tax payers particularly, those in the informal sector into the tax net. The issue of corruption as a result of collaboration of the tax officials with the tax payers created a lop hole for revenue loss in the tax. This became a problem to the State because it was difficult for the State to generate the needed internal revenue to complement the revenue accrued to the State from the Federation Account to carry out its ever increasing responsibilities, hence the need to adopt a better and efficient mechanism for tax collection in the State. Owing to the evolving and more efficient development in the world of Information, Communication Technology in governance activities, the deployment of ICT became a veritable instrument to address the observed challenges. The objective of the introduction of the initiative was basically to enhance the revenue generation profile of the State in order to meet its objectives. The following Ministries, Departments and Agencies were involved in revenue collection during the period under review: Bayelsa State Board of Internal Revenue, Bayelsa State Judiciary,

Ministry of Justice, Bayelsa State Environmental Sanitation Authority, Bayelsa State Physical Planning and Development Authority, Bayelsa State Geographical Information System, Bayelsa State Sports Council, Ministry of Trade and Investment, Ministry of Transport, Ministry of Lands and Housing, Ministry of Work, Ministry of Agriculture and Natural Resources, Bayelsa State Due Process, Bureau, Bayelsa State Chieftaincy Affairs, etc.

From the study, we note that there is varying degree of revenue inflow from the various Ministries Departments and Agencies. These inflows have been inconsistent as seen the data obtained for this study. Not all the Ministries, Departments and Agencies remit revenue collected into the Treasury the State Government. The Bayelsa State Internal Revenue Agency is the Agency with the consistent record of revenue collected within the period under review, as well as the Bayelsa State Judiciary.

The data presented in this study showed that there was a loophole that enhanced corrupt practices in revenue collection through the old manual and traditional means of collection of revenue in the State, hence the need to adopt new and modern initiatives that would block such loop holes. Amongst such loopholes is the connivance of officials of the Ministries, Departments and Agencies responsible for such collections to defraud the State through underpayment or non-payment of taxes and rates that were supposed to be accrued to the State. This ensured that government was not able to meet its financial responsibilities. This apparently gives reasons which most of the officers were largely opposed to the introduction of the new initiative of adopting information and communication technology for the payment of taxes in the State. There was also the challenge of sceptism by tax payers on the initiative by government, hence the non-cooperation of the tax paying public. But sufficient enlightenment by the government brought about some level of trust and confidence to the citizenry, hence ensuring substantial compliance to tax payment in the State.

The challenges of tax evasion was also a major problem that faced tax collection in the State. To this extent, the need to bring in eligible tax payers to the tax-net was to bring about increase in the participation of those who are eligible to pay tax to the tax net thereby increasing the revenue collected by the State. The introduction of Information Communication Technology ensured that tax payers were appropriately captured and data easily stored and retrieved. It was also not totally easy to manipulate the records as was done through the manual and traditional system of tax collection in the State, hence a drastic reduction in corruption in tax collection. Another reason for tax evasion was attributed to the difficulties evidenced in tax payment by the citizens, hence the evasion of tax by the tax payer. Tax payment was supposed to be seamless and less difficult so as to make the tax payer not undergo stress in payment of tax. The adoption of ICT makes tax collection easier as people can pay taxes from the comfort of their homes without going either to the banks to experience long queues, and waste precious time in the name of paying taxes. It is this sort of experience that discourage citizens from the payment of taxes. The adoption of ICT has eroded this difficulty, hence improving revenue collection by the State. We also note that the lack of confidence in the prudent management of taxes by the citizens has also necessitated the lack of willingness by the tax payer to pay their taxes promptly and correctly. This development has been a recusing factor in tax collection in most developing states. It is assumed that tax revenue are not adequately utilized as it falls into the hands of corrupt public officers who embezzle such funds. In this regard, citizens do not feel obliged to carry out their civil responsibilities to the State. However, it is obvious that when citizens see and feel the impact of their taxes on their lives. They will feel obliged and motivated to pay their taxes for the overall development of the State. In this regard, it is the responsibility of government to boost the confidence of the tax payer by ensuring the judicious use of tax collected in the State.

Challenges of training and retraining of staff on the use of Information, Communication Technology in revenue collection was another challenge posed in the process. The introduction of ICT in revenue collection needed some level of training and retraining of requisite staff to enhance the efficiency and effectiveness of the process. There is no doubt that there is no amount of amount invested in training and retraining

of staff for this purpose that would amount to a waste as it would increase and enhance the efficiency of such staff to carry out their assignments for the overall development of the State.

The study also reveals that despite the introduction of information, communication technology in the collection of taxes and revenue in the State, not all revenue generation agencies regularly remitted their collections to the Treasury of the State. Even when they did so the money remitted were paltry and not commensurate with what was collected. This apparently means that the initiative has not properly blocked the loopholes by which internally accrued revenue to the state has been diverted. There seems to be some sort corrupt tendencies by staff, hence the need to block the loophole perhaps through proper discipline and sanction of corrupt staff who undermine the process and efforts of the State to collect the needed resources that would ensure that adequate revenue was collected for development [purpose]. The study also discovered the challenges of adequate training and rete raining of staff in the application of information, communication technology in the collection of revenue in the State. To this extent, the wrong and misapplication of the devices has constituted a drain the revenue collection of the State. It was also discovered that most ICT deployed in collecting revenue were obsolete and impeded the efficiency of the [process].

4. Conclusion

Summary: Recognising the importance of financial resources to carry out the ever increasing responsibilities of the Government to the citizenry, this study examined the adoption of the use of Information, Communication and Technology in the revenue drive of the Bayelsa State government between 2015 and 2023. To this end, the paper highlights the fact that government activities have over the years increased in size and scope given the complex nature and activities of the State. To this end government need resources q to achieve the objectives for which they are set up. It points out that without the needed resources it will be difficult for government to meet its responsibilities, hence the need to ensure that revenue collection becomes effective. The study also noticed that over the years, the traditional method of tax collection has been fraught with much inadequacies, ranging from ineffective and inefficiency of staff, tax evasion as a result of the cumbersome nature of tax collection, corruption and many others, This has created a drain in public revenue collection over the years and has resulted to a negative strain in the economy of the state thereby posing a problem which the study is aimed at solving. The paper explored the conceptual and empirical review of the perspectives of scholars on the dominant variables in the study. The literature reviewed were under the following concept: Information and Communication Technology, Information , Communication Technology and Economic Development, Information Communication Technology and National Development and revenue generation, Sources of revenue, revenue systems in Nigeria, classification of revenue. Empirical review of the variables in the study was also carried out. . The study adopted the Diffusion Innovation Theory otherwise known as the Innovation Diffusion Theory (IDT) postulated by Everett Rogers as theoretical framework. The data for this study were discussed and analysed content analysed.

Conclusion:

The deployment of information communication technology in various spheres of human endeavours have come to stay in modern times. Despite some negativities associated with the introduction of technology, there are far more advantages enhance the activities and increase efficiency and effectiveness in the way and manner things are done. In a bid to enhance and increase revenue generation and collection in the State, the Bayelsa State Government introduced the use of various forms of information and communication mechanisms in the collection of revenue in the State. It jettisons the old fashioned traditional way and method of physical and cash collection of revenue which is cumbersome, energy sapping and encouraged corruption thereby constituting a waste and leakage in government revenue. As a result of this, it was difficult for the government

to get the needed revenue to carry out its financial obligations to the citizenry. To this end, the government adopted the new initiative in 2015 through its Ministries, Agencies and Department. The study notes that the new initiative at the initial state was resisted by both staff of the Ministries, Departments and Agencies, as well as the tax paying public. The reason being that the leakages which characterized the old system of tax collection was blocked, and the tax paying public were sceptical on the motive of government in the introduction of the initiative. However, through adequate sensitization, enlightenment and building of trust in the tax paying public, there can be substantial acceptance of the policy as the ease of tax payment became appreciated. The study also observed that there were fluctuations in revenue generated by the various Ministries, Departments and Agencies. The study showed that with the general acceptance and continued improvement in the revenue collection of the State, the prospects of enhanced revenue for Bayelsa State is high.

Recommendations:

Based on the findings of this study, the following recommendations are made:

Bayelsa State government should engage on vigorous public enlightenment and sensitization of the tax paying public on the introduction and benefits of the new initiative in tax payment.

The Bayelsa State Government should enforce the civil service/public service rules on employees who try to sabotage the efforts of the government in improving its revenue profile.

The Bayelsa State government should build the confidence of the tax paying public by ensuring judicious utilization of the tax, such that the citizens can see what their taxes were used for. This will enhance the trust and ensure that tax payers willingly pay their taxes believing that they will be judiciously utilized.

The State Government should ensure that staff of the revenue generating Ministries, Departments and Agencies are adequately trained in the use of modern ICT facilities so as to enhance the efficiency and effectiveness of revenue collection in the State

Adequate funds should be voted for purchase of requisite technological facilities, both hard ware and software, by the state government that would enhance efficiency and effectiveness in revenue generation in Bayelsa State.

REFERENCES

- [1] T. W. Yunana, Y. A. Yunana, and D. A. Muhammad, "Impact of internal revenue generation on the development of local government areas in Kaduna State: A case study of Chikum local government," *Dutse Journal of Economics and Development Studies*, vol. 8, no. 1, pp. 184–194, 2019.
- [2] I. R. Akintoye, F. F. Adegbe, and N. S. Awotomilusi, "Determinants of tax revenue: A case of Nigeria," *International Journal of Business Management*, vol. 7, no. 4, pp. 23–29, 2019.
- [3] M. E. Braimoh and A. U. Ouoha, "Revenue generation and performance in local governance in Nigeria: A survey of people's perception in selected local governments in Edo State," *Journal of Accounting and Taxation Research Group*, vol. 6, no. 1, 2022.
- [4] M. O. Cornelius, A. Ogar, and F. A. Oka, "The impact of tax revenue on economic growth: Evidence from Nigeria," *Journal of Economics and Finance*, vol. 7, no. 1, pp. 32–38, 2016.
- [5] J. O. Adewoye and C. O. Olaoye, "Usage of information technology to enhance professional productivity among accountants in Ekiti State," *International Journal of Accounting and Financial Management Research*, vol. 4, no. 2, pp. 7–18, 2014.
- [6] A. Crede and R. Mansell, Eds., "The importance of sustainable development: ICTs in developing countries," *International Institute for Communication and Development E-Journal*, Aug. 1998.
- [7] J. O. Adewoye, A. O. Ademola, O. D. Afolabi, and O. Oyeleye, "Performance impact of information communication technology (ICTs) on women entrepreneurship in South Western Nigeria," *Finance Management*, vol. 65, pp. 19905–19909, 2013.
- [8] A. A. Adenugba and C. F. Ogechi, "The effect of internal revenue on infrastructural development: A study of Lagos State Internal Revenue Service," *Journal of Educational and Social Research*, vol. 5, no. 1, pp. 419–436, 2013.

- [9] O. Afuberoh and E. Okoye, "The impact of taxation on revenue generation in Nigeria: A study of federal capital territory and selected states," *International Journal of Public Administration and Management Research*, vol. 2, no. 2, pp. 22–47, 2014.
- [10] T. O. Asaolu, J. Olabisi, S. O. Akinbode, and O. N. Alebiosu, "Tax revenue and economic growth in Nigeria," *Scholedge International Journal of Management and Development*, vol. 57, pp. 72–85, 2018.
- [11] T. O. Asaolu, S. O. Dopemu, and J. U. Monday, "Impact of tax reforms on revenue generation in Lagos State: A time series approach," *Research Journal of Finance and Accounting*, vol. 6, no. 8, pp. 55–67, 2015.
- [12] M. Atakpa, S. Ocheni, and B. C. Nwankwo, "Analysis of options for maximizing local government internally generated revenue in Nigeria," *International Journal of Learning and Development*, vol. 2, no. 5, pp. 94–104, 2012.
- [13] Australian National Audit Office, *Better Practice Guide: Innovation in the Public Sector*, 2015.
- [14] A. Edogbanya and S. Ja'afaru, "Revenue generation and its impact on governmental efforts," *Global Journal of Management and Business Research*, vol. 13, no. 4, pp. 71–85, 2013.
- [15] E. E. Edemidiong, I. B. Ebong, and O. Ozinegbe, "Information communication technology (ICT) and service delivery in Nigerian public sector: A study of Federal Inland Revenue Service (2000–2019)," *EPRA International Journal of Environmental Economics, Commerce and Educational Management*, vol. 7, no. 4, pp. 1–15, 2020.
- [16] B. R. Eja, S. E. Idaka, and J. Ogar-Abang, "Inhibiting factors to tax revenue generation in Cross River State, Nigeria," *Global Journal of Social Sciences*, vol. 17, pp. 111–118, 2018.
- [17] S. S. Enejo and T. Gabriel, "Taxation and revenue generation: An empirical investigation of selected states in Nigeria," *Journal of Poverty, Investment and Development*, vol. 4, pp. 102–115, 2014.
- [18] G. D. Gomero, "Factors influencing revenue collection success in the Beneshangul Gumzu region: The case of Assossa town," *Journal of Positive School Psychology*, vol. 6, no. 2, pp. 5788–5797, 2022.
- [19] D. B. Gwa and J. Kass, "The contribution of tax revenue on the economic growth of Nigeria," *International Journal of Inflation and Good Governance Quagmire in Africa*, vol. 10, no. 5, pp. 48–59, 2018.
- [20] A. Ibeogu and F. Ulo, "Internally generated revenue in the local government system and sustainable community development in Nigeria," *International Journal of Research in Business Management*, vol. 3, no. 11, pp. 11–120, 2015.
- [21] E. O. Ifero and E. O. Eko, "Tax innovation, administration and revenue generation in Nigeria: A case study of Cross River State," *International Journal of Economics and Management Engineering*, vol. 8, no. 5, pp. 76–89, 2014.
- [22] P. N. Johnson and C. O. Omodero, "Governance quality and tax revenue mobilization in Nigeria," *Journal of Legal Studies*, vol. 28, no. 42, pp. 1–41, 2021.
- [23] E. Karahanna, D. N. Straub, and N. L. Chervany, "Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs," *MIS Quarterly*, pp. 182–213, 1999.
- [24] D. Karanja, A. K. A. Sang, and M. Ndiranga, "Influence of integration of ICT on human resource management in Kenyan public universities," *International Journal of Sustainability Management and Information Technology*, vol. 3, no. 6, pp. 73–84, 2018.
- [25] B. D. Kiabel and N. G. Nwokah, "Boosting revenue generation by state government in Nigeria: The tax consultant's option revisited," *European Journal of Social Sciences*, vol. 4, pp. 532–539, 2009.
- [26] C. R. Kothari and G. Garge, *Research Methodology: Methods and Techniques*, 3rd ed. New Delhi, India: New Age Int., 2014.
- [27] K. Kreijns, F. van Acker, M. Vermeulen, and H. van Buuren, "What stimulates teachers to integrate ICT in their pedagogical practices?," *Computers in Human Behavior*, vol. 29, no. 1, pp. 217–225, 2014.
- [28] S. H. Lee, L. John, and G. Luis, "Telecommunications and economic growth: An empirical analysis of Sub-Saharan Africa," *Applied Economics*, vol. 44, pp. 461–469, 2012.
- [29] M. Mansor and Z. Gurama, "Factors influencing tax evasion in Gombe State, Nigeria," *European Proceedings of Social and Behavioural Sciences*, 2016.
- [30] W. Mary and M. Cox, *Information and Communication Technology Inside the Black Box*. Granada, Spain: Granada Learning Publishers, 2007.
- [31] N. T. Matsepe and E. Vander Lingen, "Determinants of emerging technologies adoption in the South African financial sector," *South African Journal of Business Management*, vol. 53, no. 1, pp. 1–12, 2022.
- [32] S. Mugisha, "Using ICT development: The case of Uganda," presented at the International Conference on Information Technology, Communication and Development, Kathmandu, Nepal, 2001.
- [33] Federal Ministry of Finance, *National Tax Policy*, Nigeria, 2012.
- [34] F. F. Nchuchuwe and D. A. Ojo, "E-governance, revenue generation and public service delivery in Nigeria," in *Proc. Covenant Univ. Conf. on e-Governance in Nigeria*, 2017.

- [35] C. J. Okafor and E. O. Ibekwe, "Assessment of implication of e-governance and workers performance in Imo State Civil Service (2013–2019)," *Journal of Public Administration and Governance Research*, vol. 4, no. 2, pp. 56–68, 2020.
- [36] E. I. Okoye and A. A. Olayinka, "Effect of electronic taxation on revenue generation in Lagos State," *Journal of Global Accounting*, vol. 7, no. 1, pp. 38–62, 2021.
- [37] A. O. Okunowo, "FIRS introduces e-filing system in Nigeria," [Online]. Available: LinkedIn, 2015.
- [38] C. O. Olaoye and O. O. Atitola, "Effects of e-tax payment on revenue generation in Nigeria," *Journal of Accounting, Business and Finance Research*, vol. 4, no. 2, pp. 56–65, 2018.
- [39] C. O. Olaoye and B. A. Kehinde, "Impact of information technology on tax administration in Southwest Nigeria," *Archives of Business Research*, vol. 5, no. 9, pp. 139–150.
- [40] O. O. Olasanmi, T. Ayoola, and M. T. Kareem, "Evaluation of ICT use among women entrepreneurs in Nigeria," *International Journal of Management and Business Studies*, vol. 3, no. 2, pp. 43–54, 2012.
- [41] S. T. Oloruntoyin and I. A. Adeyanju, "The role and prospect of information and communication technology in national development," *International Journal of Computing Academic Research*, vol. 2, no. 3, pp. 113–119, 2013.
- [42] A. A. Onaolapo, R. J. Aworemi, and O. A. Ajala, "Assessment of value added tax and its effects on revenue generation in Nigeria," *International Journal of Business and Social Sciences*, vol. 4, no. 1, pp. 220–225, 2013.
- [43] H. O. Owino, S. Otieno, and F. S. Odovo, "Influence of ICT on revenue collection in county governments in Kenya," *International Journal of Recent Research in Commerce, Economics and Management*, vol. 4, no. 1, pp. 66–96, 2017.
- [44] S. O. Uhumwuangho and S. Aibiyei, "Problems of revenue generation in local government administration in Nigeria," *International Journal of Arts and Humanities*, vol. 2, no. 3, pp. 192–209, 2013.
- [45] D. Wasao, "The effect of online tax system on tax compliance among small taxpayers," Univ. Nairobi, 2014.
- [46] G. Wilson and A. C. Anorno, "Empirical analysis of e-governance and socio-economic development of Imo State, Nigeria (2015–2020)," *NPSA South-South Journal of Political Science*, vol. 3, no. 1, 2022.