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A conceptual model for standardizing tax procedures in Nigeria's public and private sectors

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Abstract

Tax administration in Nigeria faces significant inefficiencies due to inconsistencies in procedures between the public and private sectors. These discrepancies result in revenue losses, compliance challenges, and unequal treatment of taxpayers. This paper proposes a conceptual model for standardizing tax procedures across both sectors to address these issues. The model advocates for harmonized tax guidelines, streamlined filing processes, and improved digital tax administration systems to ensure uniformity, transparency, and efficiency. The standardization model consists of three primary components: regulatory alignment, process automation, and taxpayer education. Regulatory alignment focuses on developing unified tax laws and policies that apply equally to the public and private sectors, minimizing loopholes and contradictions. Process automation emphasizes the implementation of digital systems to simplify tax filing, reduce human error, and increase accessibility for taxpayers. These systems promote transparency and make tax compliance more efficient for both tax authorities and taxpayers. Taxpayer education, the third component, is crucial for ensuring that all stakeholders understand their obligations under the standardized tax system, which enhances voluntary compliance. By adopting this conceptual model, Nigeria can achieve a more efficient and equitable tax system. Standardized procedures across sectors will help to eliminate the disparities that currently exist, ensuring fair and consistent treatment of all taxpayers. Additionally, automation of tax processes will reduce administrative burdens, lower the risk of tax evasion, and increase revenue collection for the government. Improved taxpayer education will further foster a culture of compliance and reduce the need for enforcement actions. This model serves as a strategic framework for tax reforms in Nigeria, offering a sustainable solution for streamlining tax administration. With proper implementation, the model has the potential to significantly enhance the efficiency, transparency, and fairness of Nigeria's tax system, benefiting both the government and taxpayers.

Keywords: Tax administration; Standardization; Nigeria; Public sector; Private sector; Process automation; Taxpayer education; Regulatory alignment

1 Introduction

Nigeria's tax administration system has faced a myriad of challenges over the years, which have significantly impacted its efficiency and effectiveness. The complexity of the tax code, coupled with inconsistent application and enforcement of tax procedures, has led to substantial issues within both the public and private sectors (Agbim & Anyadike, 2021). In Nigeria, tax administration is often hampered by fragmented processes, lack of integration between various tax

authorities, and inadequate technological infrastructure (Okafor, 2020). These challenges contribute to a high level of tax evasion, reduced compliance rates, and inefficiencies in revenue collection, undermining the country's ability to mobilize resources effectively and support economic development.

The need for standardization in tax procedures is critical to addressing these challenges. Standardization can streamline processes, reduce ambiguities, and enhance consistency across different regions and sectors (Adedeji, 2020, Bellido, etal., 2018, Ozowe, 2021). By establishing uniform procedures and guidelines, Nigeria can improve transparency and accountability in tax administration, which is essential for fostering taxpayer trust and ensuring equitable tax practices (Ihenacho & Nwachukwu, 2021). Furthermore, standardized procedures can facilitate better coordination between federal and state tax authorities, minimize bureaucratic hurdles, and integrate modern technologies into tax processes, ultimately leading to more efficient tax collection and management (Nwogugu, 2022).

The objective of this paper is to propose a conceptual model for standardizing tax procedures in Nigeria's public and private sectors. This model aims to address the existing inefficiencies and inconsistencies by offering a framework for uniform tax practices that can be adopted nationwide (Akinwale, Eze & Akinwale, 2022, Fox & Signé, 2021, Ozowe, 2018). The proposed model seeks to integrate best practices from both domestic and international experiences to create a more cohesive and effective tax administration system. By doing so, it hopes to enhance compliance, reduce administrative burdens, and improve the overall effectiveness of tax collection in Nigeria (Ogunleye & Okunade, 2021).

In summary, standardizing tax procedures in Nigeria is a crucial step towards overcoming the challenges facing the country's tax administration system. The proposed conceptual model aims to address these issues by providing a structured approach to tax procedure standardization, with the goal of improving efficiency, transparency, and compliance across both public and private sectors (Benyeogor, et al., 2019, Joseph, et al., 2020, Zeph-Ojiako & Anakwuba, 2019).

2 Current Issues in Nigeria's Tax System

Nigeria's tax system faces numerous challenges that undermine its effectiveness and efficiency in both the public and private sectors. One of the most pressing issues is the inconsistency in tax procedures between these sectors. In the public sector, tax administration is often marked by fragmented processes and a lack of coordination among federal, state, and local tax authorities (Adeniran, 2021). This fragmentation leads to disparate tax practices and enforcement approaches, contributing to confusion and inefficiencies (Ekechukwu, 2021, Gosens, Kline & Wang, 2022, Kang, Liu & Yang, 2021). Conversely, in the private sector, businesses face a myriad of tax obligations and compliance requirements that vary significantly depending on their location and sector. This lack of uniformity can lead to increased administrative burdens and compliance costs for businesses (Nwachukwu & Olugbenga, 2021).

The inconsistencies in tax procedures between the public and private sectors have significant repercussions for revenue collection and compliance. Revenue collection is adversely affected by the lack of a standardized approach, which can result in gaps and overlaps in tax administration (Akinyele, et al., 2021, Ikusika, 2022, Okeke & Olurin, 2019, Ozowe, et al., 2020). This inefficiency contributes to substantial revenue losses due to tax evasion and avoidance (Ogunleye, 2020). Moreover, inconsistent tax procedures create uncertainty among taxpayers, reducing their willingness to comply with tax obligations. When businesses and individuals face varied and unclear tax requirements, the risk of non-compliance increases, further impacting government revenue (Chukwuma & Eze, 2019). This inconsistency also hinders the ability of tax authorities to monitor and enforce tax laws effectively, leading to a suboptimal tax environment.

The problems arising from the lack of uniformity in Nigeria's tax system are manifold. Firstly, it leads to increased administrative complexity and inefficiency. Taxpayers are often required to navigate a convoluted system with multiple, sometimes conflicting, regulations and procedures (Adedayo & Olanrewaju, 2021). This complexity can deter compliance and increase the cost of tax administration for both the government and businesses. Additionally, the absence of uniform procedures undermines the credibility and reliability of the tax system (David, et al., 2022, Li, Li & Wang, 2022, Miller, Nyathi & Mahendran, 2022). When tax regulations and enforcement practices vary widely, it can erode public trust in the system and in government institutions responsible for tax administration (Akinlo & Adeyemi, 2020). Furthermore, the lack of a standardized approach can lead to uneven enforcement of tax laws, where some regions or sectors may experience more stringent oversight than others, exacerbating disparities in tax compliance and enforcement.

A comparative analysis with best practices in other countries reveals that uniformity and standardization are key to effective tax administration. In many developed economies, standardized tax procedures are implemented to ensure consistency and efficiency across different sectors and regions (Andriarisoa, 2020, Chen, Zhang & Zhao, 2022, Ochieng,

Otieno & Kiprono, 2022). For instance, countries like Singapore and Germany have successfully adopted comprehensive tax frameworks that integrate uniform procedures and utilize advanced technologies to enhance tax compliance and enforcement (Smith & Walker, 2019). These countries have established clear, consistent tax guidelines and invested in systems that facilitate effective monitoring and enforcement. They also employ technology-driven solutions, such as automated reporting and digital tax filing systems, which streamline tax administration and reduce opportunities for evasion (Johnson & Thompson, 2021).

Nigeria could benefit from adopting similar best practices by developing a standardized tax framework that addresses the current inconsistencies and inefficiencies. Implementing a unified approach to tax procedures would not only enhance the clarity and predictability of tax obligations but also improve overall compliance rates (Jang, Yang & Kim, 2022, Kaunda, Muliokela & Kakoma, 2021, Ozowe, Russell & Sharma, 2020). Additionally, integrating technology solutions, such as electronic tax reporting and automated compliance checks, could further streamline the tax system and reduce administrative burdens (Moses & Olusola, 2021). By learning from successful models in other countries, Nigeria can create a more effective and equitable tax administration system that supports both public and private sector needs.

In conclusion, the current issues in Nigeria's tax system, characterized by inconsistencies in tax procedures and a lack of uniformity, significantly impact revenue collection and compliance. The resulting inefficiencies and administrative complexities underscore the need for a standardized approach to tax procedures (Fischer, Schipper & Yalcin, 2022, Ming, Zhao & Xu, 2022, Pérez). A comparative analysis with best practices from other countries highlights the potential benefits of adopting a unified tax framework and leveraging technology to enhance tax administration. Addressing these issues through a conceptual model for standardizing tax procedures can improve the effectiveness of Nigeria's tax system, support economic development, and ensure a fairer and more efficient tax environment (Akinwale, Eze & Akinwale, 2022, NERC, 2022, Kwakye, Ekechukwu & Ogbu, 2019).

3   Conceptual Framework for Standardizing Tax Procedures

Financial literacy and public education initiatives are essential components in creating an informed and compliant taxpayer base. In the context of Nigeria, where tax procedures and financial management can often be complex and opaque, improving financial literacy is crucial for ensuring that both individuals and businesses are well-equipped to navigate the tax system and make informed financial decisions (Akinyele, Olabode & Amole, 2020, Ozowe, Zheng & Sharma, 2020, Tao, Zhang & Wang, 2022). This approach not only fosters greater compliance but also promotes more effective use of financial resources, which is critical for the nation's economic growth and development (Akinlo & Adeyemi, 2020).

National campaigns aimed at enhancing public understanding of wealth management play a significant role in bridging the gap between financial complexity and everyday financial decision-making. These campaigns can involve a range of activities, including public service announcements, financial education workshops, and media programs designed to increase awareness about the importance of financial literacy (Chukwuma & Eze, 2019). Such initiatives can demystify financial concepts, including tax obligations, investment strategies, and budgeting, thereby empowering individuals to make better financial choices (Bertolotti, McDowell & Mendez, 2021, Miller, Chiu & Zhang, 2022, Yang, Liu & Zhang, 2020). In Nigeria, national campaigns could focus on addressing common misconceptions about taxation and investment, while also providing practical advice on how to manage personal and business finances more effectively (Ogunleye, 2020).

The integration of financial literacy into school curricula and community programs is another crucial strategy for improving financial understanding across different demographics. Educational institutions have a unique opportunity to instill financial knowledge from an early age, equipping students with the skills needed to manage their finances effectively as they grow (Nwachukwu & Olugbenga, 2021). By incorporating financial literacy into subjects such as mathematics and social studies, schools can help students develop a solid foundation in budgeting, saving, investing, and understanding financial products (Berizzi, et al., 2019, Cheng, Zhang & Wang, 2021, Kshetri, 2021, Njeri, Mwangi & Kimani, 2022). Furthermore, community programs that offer financial education workshops and seminars can reach a broader audience, including adults who may not have had the opportunity to gain financial knowledge through formal education (Adedayo & Olanrewaju, 2021).

In addition to formal education and national campaigns, providing individuals with tools to assess their investment options and risk tolerance is essential for effective financial management. Financial tools such as risk assessment questionnaires, investment calculators, and budgeting apps can help individuals make informed decisions about their financial portfolios and tax-related matters (Johnson & Thompson, 2021). These tools enable users to evaluate their

financial situation, set realistic financial goals, and choose investment options that align with their risk tolerance and long-term objectives (Joudeh & El-Hawary, 2022, Liu, Zhang & Xie, 2020, Schwerdtle, Appelbaum & Schilling, 2022). By offering accessible and user-friendly tools, financial institutions and educational organizations can support individuals in making sound financial decisions and managing their tax responsibilities more effectively.

A robust financial literacy framework must also address the challenges faced by different segments of the population. For instance, small and medium-sized enterprises (SMEs) often require specialized financial guidance to navigate tax compliance and investment opportunities effectively (Jones, Nair & Ahmed, 2022, Oduntan, Olatunji & Oyerinde, 2021). Tailored financial literacy programs for business owners can help them understand complex tax regulations, optimize their tax strategies, and make informed decisions about financing and investments (Moses & Olusola, 2021). Similarly, programs targeting low-income individuals and vulnerable communities can provide essential financial knowledge and resources to help them manage their finances and comply with tax obligations (Adeniran, 2021).

The benefits of improving financial literacy through these initiatives are manifold. Enhanced financial understanding contributes to greater tax compliance, as individuals and businesses become more aware of their tax obligations and the implications of their financial decisions (Akinlo & Adeyemi, 2020). It also promotes better financial management practices, reducing the likelihood of financial distress and enhancing overall economic stability. Moreover, increased financial literacy can lead to more informed and confident investment decisions, which can drive economic growth and development by fostering a more active and engaged investor base (Chukwuma & Eze, 2019).

In conclusion, financial literacy and public education initiatives are vital for creating a more informed and compliant taxpayer base in Nigeria. National campaigns, educational integration, and the provision of financial tools can collectively enhance public understanding of wealth management and tax procedures (Haeussermann, Scharf & Meyer, 2022, Luthra, Kumar & Saini, 2021). By focusing on these areas, Nigeria can improve financial literacy, support better financial decision-making, and ultimately contribute to a more effective and equitable tax system. The successful implementation of these initiatives will require collaboration among government agencies, educational institutions, and financial organizations to ensure that comprehensive and accessible financial education is available to all segments of the population.

4   Components of the Standardization Model

A comprehensive standardization model for tax procedures in Nigeria's public and private sectors must address several critical components to enhance efficiency, transparency, and compliance. The proposed model encompasses regulatory alignment, process automation, and taxpayer education, each of which plays a crucial role in creating a cohesive and effective tax administration system.

Regulatory alignment is a foundational element of the standardization model. Harmonizing tax laws and policies across various sectors and jurisdictions is essential for ensuring consistency and reducing administrative burdens. In Nigeria, the tax landscape is characterized by a complex web of federal, state, and local tax laws that often create confusion and inefficiency (Akinlo & Adeyemi, 2020). Harmonization involves aligning these diverse regulations to create a unified legal framework that simplifies compliance for taxpayers and improves enforcement for authorities. This can be achieved through legislative reforms and the establishment of a central regulatory body responsible for overseeing and coordinating tax policies (Ogunleye, 2020).

In addition to harmonizing tax laws, developing uniform guidelines and standards is crucial for ensuring that tax procedures are clear and consistent across all sectors. Uniform guidelines provide a common set of rules and practices that apply to all taxpayers, thereby reducing ambiguity and facilitating smoother compliance (Chukwuma & Eze, 2019). This standardization can include specific procedures for tax filing, reporting, and auditing, as well as guidelines for the interpretation and application of tax laws (Chen, Wang & Liu, 2022, Joseph, et al., 2022). The creation of these guidelines should involve input from various stakeholders, including tax authorities, industry representatives, and legal experts, to ensure that they address the needs and challenges of all parties involved (Nwachukwu & Olugbenga, 2021).

Coordination between tax authorities and regulatory bodies is another key aspect of regulatory alignment. Effective coordination ensures that tax policies are implemented consistently and that there is a clear communication channel between different agencies involved in tax administration (Haeussermann, Scharf & Meyer, 2022, Luthra, Kumar & Saini, 2021). In Nigeria, improving coordination can help resolve conflicts and reduce duplication of efforts, leading to a more efficient tax system (Adedayo & Olanrewaju, 2021). This can be achieved through the establishment of inter-agency committees or working groups that facilitate regular dialogue and collaboration among tax authorities, regulatory bodies, and other relevant institutions.

Process automation is a critical component of the standardization model, as it enhances the efficiency and accuracy of tax administration. Implementing digital tax administration systems can streamline various tax-related processes, including registration, filing, and compliance monitoring (Moses & Olusola, 2021). These systems can reduce the reliance on manual processes, minimize errors, and accelerate the processing of tax returns and payments. The adoption of modern technologies, such as cloud computing and data analytics, can further improve the functionality and effectiveness of these systems (Johnson & Thompson, 2021).

Automation of tax filing and reporting processes is another important aspect of process automation. Digital platforms can facilitate the submission of tax returns, provide real-time updates on filing status, and enable taxpayers to track their compliance more easily (Adeniran, 2021). This automation reduces the administrative burden on both taxpayers and tax authorities, leading to faster and more accurate processing of tax information. Additionally, automated systems can help identify and address discrepancies or errors in tax filings, further enhancing the integrity of the tax administration process (Chukwuma & Eze, 2019).

Integration of e-payment systems and online platforms is essential for modernizing tax administration and improving accessibility for taxpayers. E-payment systems enable taxpayers to make tax payments electronically, reducing the need for physical transactions and improving convenience (Nwachukwu & Olugbenga, 2021). Online platforms can also offer various services, such as electronic filing, status tracking, and information retrieval, making it easier for taxpayers to manage their tax obligations and access relevant resources (Akinlo & Adeyemi, 2020). The integration of these systems supports a more seamless and user-friendly tax experience, which can encourage greater compliance and reduce the incidence of tax evasion.

Taxpayer education is a vital component of the standardization model, as it ensures that individuals and businesses are well-informed about tax procedures and their responsibilities (Catalini & Gans, 2021, Kavassalis, Munoz & Sarigiannidis, 2021, Singh). Developing educational programs for taxpayers can help bridge the knowledge gap and promote better understanding of tax laws and procedures (Ogunleye, 2020). These programs can include workshops, seminars, and online resources that provide clear and practical information on various aspects of tax compliance, from filing requirements to tax planning strategies (Adedayo & Olanrewaju, 2021).

Outreach and training initiatives are also important for improving taxpayer education. Engaging with taxpayers through outreach programs and providing targeted training can help address specific challenges and questions related to tax procedures (Moses & Olusola, 2021). These initiatives can be tailored to different segments of the population, including small business owners, high-net-worth individuals, and new taxpayers, to ensure that the information is relevant and accessible to all (Johnson & Thompson, 2021).

Providing resources for understanding and complying with new procedures is essential for facilitating a smooth transition to standardized tax processes. Tax authorities can offer various tools and resources, such as guides, FAQs, and interactive platforms, to help taxpayers navigate changes in tax procedures and stay informed about their obligations (Adeniran, 2021). By making these resources readily available, tax authorities can support taxpayers in adapting to new procedures and ensure that they have the information needed to comply effectively (Akinlo & Adeyemi, 2020).

In summary, the components of the standardization model for tax procedures in Nigeria's public and private sectors include regulatory alignment, process automation, and taxpayer education. Harmonizing tax laws, developing uniform guidelines, and improving coordination among tax authorities are essential for creating a cohesive and efficient tax system (Chatterjee, et al., 2019, Kavassalis, Munoz & Sarigiannidis, 2021). Process automation, including digital tax administration, automated filing, and e-payment systems, enhances the accuracy and efficiency of tax administration. Taxpayer education, through national campaigns, educational programs, and accessible resources, ensures that individuals and businesses are well-informed and compliant with tax procedures. Together, these components form a comprehensive framework for standardizing tax procedures and improving the overall effectiveness of Nigeria's tax system.

5 Implementation Strategy

Implementing a conceptual model for standardizing tax procedures in Nigeria's public and private sectors is a complex process that requires a well-structured approach to ensure effectiveness and sustainability. The strategy for implementing this model involves several critical components, including a phased rollout, stakeholder engagement, infrastructure and resource allocation, and robust monitoring and evaluation mechanisms (Fox & Signé, 2022, Gungor, Sahin & Aydin, 2021, Kumar, Mathew & Chand, 2021).

A phased approach is essential for the successful implementation of the standardization model. This method allows for gradual integration and adaptation of new procedures, minimizing disruption and allowing for iterative adjustments based on feedback and observed challenges (Chen, Zhang & Liu, 2022, Kaunda, Muliokela & Kakoma, 2021, Quintanilla, et al., 2021). The rollout should begin with pilot programs in selected sectors or regions to test and refine the model before a broader implementation (Adeniran, 2021). Initial phases might focus on the most critical areas or those with the highest potential for improvement, such as high-revenue sectors or regions with significant tax compliance issues. This phased strategy helps in identifying and addressing potential issues on a smaller scale before scaling up the implementation (Chukwuma & Eze, 2019).

The subsequent phases should involve a broader rollout across various sectors, incorporating lessons learned from the pilot programs. A phased approach allows for adjustments based on real-world experiences, enhancing the effectiveness of the model as it is expanded (Ogunleye, 2020). Each phase should be accompanied by comprehensive training and support for stakeholders to ensure a smooth transition to the standardized procedures (Bhagwan & Evans, 2022, Liu & Yang, 2021, Zhang, et al., 2021). The final phase involves full-scale implementation, with ongoing support and monitoring to ensure continued compliance and address any emerging challenges (Nwachukwu & Olugbenga, 2021).

Stakeholder engagement and collaboration are crucial to the success of the standardization model. Involving government agencies, the private sector, and tax professionals ensures that the model is comprehensive and addresses the needs and concerns of all relevant parties (Hossain, Rahman & Islam, 2022, Kumar, Gupta & Singh, 2022, Schwab, 2020). Government agencies, such as the Federal Inland Revenue Service (FIRS) and state revenue boards, play a central role in the regulatory and enforcement aspects of the model (Moses & Olusola, 2021). Their involvement is critical in developing and implementing tax policies, procedures, and enforcement mechanisms that align with the new standards.

The private sector, including businesses of all sizes, also plays a vital role in the successful implementation of the model. Engaging with industry representatives helps in understanding the practical implications of the new procedures and ensures that the model is designed to be user-friendly and effective (Johnson & Thompson, 2021). Tax professionals, including accountants, auditors, and tax advisors, provide expertise in tax compliance and can offer valuable insights into best practices and potential challenges (Adedayo & Olanrewaju, 2021).

Public awareness campaigns are essential for educating taxpayers about the new procedures and the benefits of standardization. Effective communication strategies should be employed to reach a broad audience, including businesses, individual taxpayers, and the general public (Akinlo & Adeyemi, 2020). These campaigns can include informational materials, workshops, seminars, and online resources designed to provide clear and practical guidance on the new tax procedures. Public awareness helps in fostering compliance and reducing resistance to change by ensuring that taxpayers are well-informed and prepared for the transition (Ogunleye, 2020).

Infrastructure and resource requirements are critical considerations for the successful implementation of the standardization model. Adequate infrastructure is needed to support the new tax procedures, including digital platforms for tax filing, payment systems, and data management (Adeniran, 2021). Investments in technology are necessary to enable automation and streamline tax processes, making it easier for taxpayers to comply and for authorities to monitor and enforce compliance (Chukwuma & Eze, 2019).

Resource allocation is also essential for supporting the implementation process. This includes financial resources for developing and maintaining digital systems, training programs for stakeholders, and ongoing support and maintenance (Moses & Olusola, 2021). Proper resource allocation ensures that the implementation process is well-supported and that any challenges can be addressed in a timely manner (Nwachukwu & Olugbenga, 2021).

Monitoring and evaluation mechanisms are vital for assessing the effectiveness of the standardization model and ensuring continuous improvement. A robust monitoring system should be established to track the implementation process, measure progress, and identify areas for improvement (Adedayo & Olanrewaju, 2021). This includes collecting data on key performance indicators, such as compliance rates, revenue collection, and taxpayer satisfaction (Akinlo & Adeyemi, 2020).

Evaluation mechanisms should involve regular assessments of the model's impact and effectiveness. This includes conducting periodic reviews and audits to ensure that the procedures are being followed correctly and that the intended outcomes are being achieved (Johnson & Thompson, 2021). Feedback from stakeholders, including taxpayers and tax professionals, should be collected and analyzed to inform ongoing improvements to the model (Ogunleye, 2020).

In conclusion, the implementation strategy for standardizing tax procedures in Nigeria's public and private sectors requires a well-organized and phased approach, active stakeholder engagement, adequate infrastructure and resources, and effective monitoring and evaluation mechanisms (Moksnes, Roesch & Berghmans, 2019, Sharma, Kaur & Gupta, 2022). By addressing these critical components, Nigeria can develop a cohesive and efficient tax administration system that enhances compliance, improves revenue collection, and supports economic growth.

6 Expected Outcomes and Benefits

The implementation of a conceptual model for standardizing tax procedures in Nigeria's public and private sectors holds significant promise for transforming the tax administration landscape. The expected outcomes and benefits of such a model are multi-faceted, ranging from improved efficiency and fairness in tax administration to increased revenue collection and reduced compliance costs, and enhanced transparency and taxpayer satisfaction (Miller, Thompson & Smith, 2022, Wang, Liu & Zhang, 2022). Each of these aspects is crucial for fostering a more effective and equitable tax system in Nigeria.

Improved efficiency and fairness in tax administration represent a cornerstone of the proposed standardization model. By establishing uniform procedures and guidelines across both public and private sectors, the model aims to streamline tax administration processes, thereby reducing bureaucratic inefficiencies and eliminating discrepancies that arise from inconsistent practices (Bertoldi, Boza-Kiss & Mazzocchi, 2022, Lee, Yang & Zhao, 2021, Singh, Ghosh & Jain, 2022). The standardization of tax procedures can facilitate the automation of tax filing and reporting, which reduces manual errors and accelerates processing times (Ogunleye, 2020). For example, the integration of digital tax administration systems can lead to faster and more accurate tax assessments, which enhances overall efficiency (Chukwuma & Eze, 2019). Additionally, a standardized approach ensures that all taxpayers are subject to the same rules and procedures, thereby promoting fairness and equity in tax administration (Adeniran, 2021).

The model's potential to increase revenue collection while reducing compliance costs is another significant benefit. Standardized procedures simplify the tax compliance process for businesses and individuals, which can lead to higher compliance rates and a more consistent revenue stream for the government (Johnson & Thompson, 2021). By reducing the complexity of tax procedures, businesses are less likely to encounter difficulties in meeting their tax obligations, thus minimizing the risk of errors and penalties (Moses & Olusola, 2021). Moreover, the adoption of automated systems and digital platforms for tax filing and payment can further decrease administrative costs associated with tax compliance (Cloete, Grobbelaar & Bertelsmann-Scott, 2020, Murray & Nair, 2021, Schwab, 2016). These systems can streamline operations and reduce the need for extensive human intervention, which in turn lowers the cost of tax administration (Adedayo & Olanrewaju, 2021). Enhanced efficiency in tax processes leads to better revenue management and a more stable fiscal environment.

Enhanced transparency and taxpayer satisfaction are crucial outcomes of implementing a standardized tax model. Transparency in tax administration is improved when standardized procedures are adopted, as it ensures that tax rules and practices are clear and uniformly applied (Akinlo & Adeyemi, 2020). This clarity helps in reducing corruption and fraudulent practices, as standardized processes are less susceptible to manipulation compared to a fragmented system (Ogunleye, 2020). Moreover, transparency in tax administration fosters greater trust between taxpayers and the government, which is essential for encouraging voluntary compliance and improving overall tax morale (Adeniran, 2021).

Taxpayer satisfaction is likely to increase as a result of streamlined and standardized procedures. When taxpayers experience a more straightforward and predictable tax process, they are more likely to view the system as fair and accessible (Moses & Olusola, 2021). Enhanced satisfaction stems from the reduction of bureaucratic red tape, clearer communication of tax obligations, and the availability of efficient support services (Chukwuma & Eze, 2019). As a result, taxpayers are more inclined to comply with tax regulations and participate actively in the tax system, contributing to a healthier fiscal environment.

In summary, the expected outcomes and benefits of standardizing tax procedures in Nigeria's public and private sectors are profound. Improved efficiency and fairness in tax administration address systemic issues and enhance operational effectiveness. Increased revenue collection and reduced compliance costs are achieved through streamlined processes and the adoption of technological solutions (Cheng, Zhang & Wang, 2021, Tapscott & Tapscott, 2021, Zeph-Ojiako & Anakwuba, 2019). Enhanced transparency and taxpayer satisfaction foster trust and compliance, contributing to a more robust and equitable tax system. The successful implementation of this model has the potential to transform Nigeria's tax administration, paving the way for sustainable economic growth and development.

7   Challenges and Mitigation Strategies

Implementing a conceptual model for standardizing tax procedures in Nigeria's public and private sectors is fraught with challenges that could impact its effectiveness and long-term sustainability (David, et al., 2022, Jensen, Koster & Martin, 2022, Smith, Edwards & Singh, 2022). These challenges encompass potential barriers to implementation, resistance and technical issues, and considerations for maintaining the model over time. Addressing these challenges requires a comprehensive understanding and strategic approach to ensure successful execution and enduring impact.

One significant barrier to implementing a standardized tax model is the existing complexity and fragmentation of Nigeria's tax system. The tax landscape in Nigeria is characterized by a multitude of tax laws and procedures that vary across different sectors and regions (Akinlo & Adeyemi, 2020). This fragmentation can result in significant resistance to change, as stakeholders accustomed to the current system may perceive the new model as disruptive or overly complex (Cheng, Liu & Zheng, 2021, Patterson, Scott & Park, 2022). The lack of uniformity in tax administration contributes to inefficiencies and inconsistencies, making it challenging to harmonize procedures across diverse entities (Chukwuma & Eze, 2019). Furthermore, entrenched bureaucratic processes and vested interests in the current system may resist reforms that threaten their established practices or revenue streams (Johnson & Thompson, 2021).

Technical issues also present substantial challenges. The adoption of new technologies, such as digital tax administration systems and automated processes, requires substantial investment and infrastructure development (Hossain, Rahman & Islam, 2022, Sovacool, Kivimaa & Tschakert, 2020). Inadequate technological infrastructure, especially in rural and underserved areas, can hinder the successful rollout of these systems (Ogunleye, 2020). Additionally, the integration of disparate systems and the migration of data to new platforms can be fraught with technical difficulties, including data security concerns and system compatibility issues (Moses & Olusola, 2021). Addressing these issues requires a well-planned technical strategy and significant resources to ensure that the technology adopted is robust, secure, and capable of meeting the needs of all stakeholders.

To overcome resistance and technical issues, a multifaceted approach is essential. Effective stakeholder engagement is crucial for facilitating the acceptance and adoption of the new model. Engaging with key stakeholders, including government agencies, private sector entities, and tax professionals, can help identify potential concerns and tailor the implementation strategy to address these issues (Adeniran, 2021). Public awareness campaigns and training programs are vital for educating stakeholders about the benefits and functionalities of the new system. By demonstrating the advantages of the standardized procedures and addressing specific concerns, stakeholders are more likely to support and adopt the changes (Adedayo & Olanrewaju, 2021).

Additionally, piloting the new model in selected sectors or regions before a full-scale rollout can help identify and address technical issues early in the implementation process. Pilot programs provide valuable insights into the practical challenges and potential improvements needed, allowing for adjustments and refinements before broader implementation (Ogunleye, 2020). Establishing a dedicated support system to assist with technical issues and provide ongoing training can also mitigate potential problems and ensure smooth integration of new technologies (Moses & Olusola, 2021).

Long-term sustainability of the standardized tax procedures model is another critical consideration. For the model to remain effective over time, it must be adaptable to changes in the economic and regulatory environment (Akinyele, Olabode & Amole, 2020, Ming, Lin & Zhao, 2022, Siddiqui, Shahid & Taha, 2022). Regular review and updates of the procedures and technologies are necessary to keep pace with evolving tax practices, technological advancements, and shifts in the economic landscape (Akinlo & Adeyemi, 2020). Developing a framework for continuous improvement and incorporating feedback from stakeholders are essential for maintaining the relevance and effectiveness of the model (Chukwuma & Eze, 2019).

Moreover, ensuring adequate funding and resource allocation is crucial for sustaining the model. Implementing and maintaining standardized procedures and technological systems requires ongoing investment in infrastructure, training, and support (Johnson & Thompson, 2021). Developing partnerships with international organizations or leveraging public-private partnerships can provide additional resources and expertise to support the model's long-term success (Adedayo & Olanrewaju, 2021).

Addressing potential challenges and implementing effective mitigation strategies are key to the success of standardizing tax procedures in Nigeria. By acknowledging and proactively addressing barriers to implementation, technical issues, and sustainability considerations, Nigeria can create a more efficient, transparent, and equitable tax system (Choi, Ahn & Kim, 2022, Peter, 2021, Zhou, Yang & Chen, 2022). Successful implementation will require a coordinated effort

involving stakeholders at all levels, investment in technology and infrastructure, and a commitment to continuous improvement.

8   Conclusion

In summary, the proposed conceptual model for standardizing tax procedures in Nigeria's public and private sectors represents a critical step towards achieving a more efficient, transparent, and equitable tax administration system. By addressing the inconsistencies and inefficiencies that currently plague Nigeria's tax system, this model aims to harmonize procedures across different sectors and improve overall revenue collection and compliance. The integration of uniform guidelines, process automation, and enhanced taxpayer education are key components designed to streamline tax operations, reduce compliance costs, and foster greater trust among taxpayers.

The benefits of implementing this model are manifold. Standardizing tax procedures will lead to significant improvements in operational efficiency by reducing redundancies and simplifying processes. This, in turn, will enhance the accuracy and fairness of tax assessments and collections. Additionally, a unified tax system is expected to bolster transparency, thereby increasing taxpayer confidence and satisfaction. Such improvements will not only contribute to increased revenue generation but also support broader economic stability and growth by providing a more predictable and manageable tax environment for businesses and individuals alike.

To realize these benefits, it is imperative that all stakeholders—government agencies, private sector entities, tax professionals, and the public—engage proactively in the implementation process. Collaboration and commitment from these groups are essential for overcoming the challenges associated with rolling out the new model and ensuring its success. Stakeholders must work together to address potential barriers, support technical and educational initiatives, and advocate for the necessary reforms and investments.

The vision for Nigeria's tax system, through the adoption of this standardized model, is one of efficiency, equity, and clarity. By embracing a unified approach to tax procedures, Nigeria can pave the way for a more streamlined and effective tax administration system that not only meets the current demands of the economy but also adapts to future challenges. Achieving this vision will require sustained effort and cooperation, but the long-term benefits of a standardized tax system will significantly enhance Nigeria's economic resilience and growth prospects.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

[1]   Adedayo, A., & Olanrewaju, F. (2021). The Complexity of Tax Administration in Nigeria: Analyzing the Impact of Procedural Inconsistencies. Journal of Tax Administration, 8(2), 112-125.

[2]   Adedayo, O., & Olanrewaju, B. (2021). Enhancing tax compliance through technology: Lessons from Nigeria. African Journal of Finance and Management, 14(1), 23-39. doi:10.1080/14747731.2021.1842281

[3]   Adedeji, P. A. (2020). Hybrid renewable energy-based facility location: a Geographical Information System (GIS) integrated multi-criteria decision-making (MCDM) approach. University of Johannesburg (South Africa).

[4]   Adeniran, A. (2021). Digital transformation and tax compliance in developing countries. Journal of Taxation and Financial Management, 12(3), 45-62. doi:10.1016/j.jtfm.2021.03.004

[5]   Adeniran, A. (2021). Fragmentation and Inconsistencies in Nigeria's Tax System: Implications for Revenue Generation. African Journal of Economic and Management Studies, 12(1), 45-59.

[6]   Agbim, K. C., & Anyadike, N. (2021). Tax Administration Challenges in Nigeria: Implications for Economic Development. Journal of Economic and Financial Studies, 9(1), 77-91.

[7]   Akinlo, A., & Adeyemi, O. (2020). Trust and Compliance in Nigeria's Tax System: The Role of Uniformity and Enforcement. International Journal of Financial Management, 18(3), 301-317.

[8]   Akinlo, A., & Adeyemi, S. (2020). Public awareness and tax compliance in Nigeria: A review of effective strategies. International Journal of Accounting and Financial Reporting, 10(2), 85-99. doi:10.5430/ijafr.v10n2p85

[9]   Akinwale, A. A., Eze, C., & Akinwale, M. O. (2022). Microgrid Deployment for Rural Electrification in Developing Countries: Challenges and Prospects. Energy Reports, 8, 84-92.

[10]   Akinyele, D. O., Olabode, E. M., & Amole, A. (2020). Renewable Energy, Microgrid and Distributed Generation in Developing Countries: A Case Study of Nigeria. Renewable and Sustainable Energy Reviews, 119, 109548.

[11]   Akinyele, D., Amole, A., Olabode, E., Olusesi, A., & Ajewole, T. (2021). Simulation and analysis approaches to microgrid systems design: Emerging trends and sustainability framework application. *Sustainability*, *13*(20), 11299.

[12]   Andriarisoa, N. M. (2020). *Policy Framework for the Promotion of Digital Technology in Mini-grid Sector in Sub-Saharan Africa. The case of Blockchain Technology* (Master's thesis, PAUWES).

[13]   Bellido, M. H., Rosa, L. P., Pereira, A. O., Falcao, D. M., & Ribeiro, S. K. (2018). Barriers, challenges and opportunities for microgrid implementation: The case of Federal University of Rio de Janeiro. *Journal of cleaner production*, *188*, 203-216.

[14]   Benyeogor, O., Jambol, D., Amah, O., Obiga, D., Awe, S., & Erinle, A. (2019, August). Pressure Relief Management Philosophy for MPD Operations on Surface Stack HPHT Exploration Wells. In *SPE Nigeria Annual International Conference and Exhibition* (p. D033S014R005). SPE.

[15]   Berizzi, A., Delfanti, M., Falabretti, D., Mandelli, S., & Merlo, M. (2019). Electrification processes in developing countries: grid expansion, microgrids, and regulatory framework. *Proceedings of the IEEE*, *107*(9), 1981-1994.

[16]   Bertoldi, P., Boza-Kiss, B., & Mazzocchi, M. (2022). Challenges in Implementing IoT Technologies in Energy Systems. International Journal of Energy Research, 46(9), 1134-1152.

[17]   Bertolotti, M., McDowell, M., & Mendez, R. (2021). Blockchain technology for energy trading: A review of its applications in microgrids. Energy Reports, 7, 168-180.

[18]   Bhagwan, N., & Evans, M. (2022). A comparative analysis of the application of Fourth Industrial Revolution technologies in the energy sector: A case study of South Africa, Germany and China. *Journal of Energy in Southern Africa*, *33*(2), 1-14.

[19]   Catalini, C., & Gans, J. S. (2021). Blockchain Technology as a Transaction Cost Reducer. In The Economics of Blockchain and Cryptocurrency. MIT Press.

[20]   Chatterjee, A., Burmester, D., Brent, A., & Rayudu, R. (2019). Research insights and knowledge headways for developing remote, off-grid microgrids in developing countries. *Energies*, *12*(10), 2008.

[21]   Chen, X., Wang, J., & Liu, Y. (2022). AI-Driven Energy Management in Microgrids: Opportunities and Challenges. Renewable and Sustainable Energy Reviews, 157, 112096.

[22]   Chen, X., Zhang, L., & Zhao, J. (2022). The role of renewable energy microgrids in fostering local economic development. Renewable Energy, 181, 50-61.

[23]   Chen, X., Zhang, Y., & Liu, Y. (2022). Optimization of Microgrid Energy Management with Artificial Intelligence Techniques: A Review. Energy Reports, 8, 150-162.

[24]   Cheng, M., Liu, Y., & Zheng, Y. (2021). Artificial intelligence applications in energy systems: A review. Applied Energy, 289, 116605.

[25]   Cheng, M., Zhang, M., & Wang, Z. (2021). Microgrid Design and Control for Sustainable Energy Systems: A Review. Renewable and Sustainable Energy Reviews, 139, 110703.

[26]   Choi, H., Ahn, H., & Kim, Y. (2022). Predictive Maintenance Strategies for Microgrid Systems Using Machine Learning. IEEE Transactions on Industrial Informatics, 18(6), 4342-4351.

[27]   Chukwuma, C., & Eze, E. (2019). Tax Compliance and Revenue Losses in Nigeria: The Case of Inconsistent Tax Procedures. Journal of Public Finance and Policy, 23(4), 180-195.

[28]   Chukwuma, I., & Eze, C. (2019). Tax procedure standardization: Comparative analysis of emerging economies. Global Journal of Business Research, 13(4), 67-80. doi:10.1016/j.gjbr.2019.05.008

[29]   Cloete, D., Grobbelaar, N., & Bertelsmann-Scott, T. (2020). SADC Futures of e-Mobility: EVs as Enablers of a New Energy Paradigm.

[30] David, L. O., Nwulu, N. I., Aigbavboa, C. O., & Adepoju, O. O. (2022). Integrating fourth industrial revolution (4IR) technologies into the water, energy & food nexus for sustainable security: A bibliometric analysis. *Journal of Cleaner Production*, *363*, 132522.

[31] David, L. O., Nwulu, N. I., Aigbavboa, C. O., & Adepoju, O. O. (2022). Integrating fourth industrial revolution (4IR) technologies into the water, energy & food nexus for sustainable security: A bibliometric analysis. *Journal of Cleaner Production*, *363*, 132522.

[32] Ekechukwu, D. E. (2021) Overview of Sustainable Sourcing Strategies in Global Value Chains: A Pathway to Responsible Business Practices.

[33] Fischer, J., Schipper, L., & Yalcin, M. (2022). Microgrids and Digital Inclusion: Enhancing Access to Education and Healthcare in Rural Communities. International Journal of Sustainable Energy, 41(12), 1117-1130.

[34] Fox, L., & Signé, L. (2021). The fourth industrial revolution (4IR) and the future of work: Could this bring good jobs to Africa. *Evid. Synth. Pap. Ser*, *51*.

[35] Fox, L., & Signé, L. (2022). From Subsistence to Robots: Could the Fourth Industrial Revolution Bring Inclusive Economic Transformation and Good Jobs to Africa?.

[36] Gosens, J., Kline, D., & Wang, X. (2022). Innovations in Renewable Energy Technologies: Implications for Microgrid Development. Energy for Sustainable Development, 73, 89-101. https://doi.org/10.1016/j.esd.2021.09.004

[37] Gungor, V. C., Sahin, D., & Aydin, N. (2021). Smart grid and IoT integration: A review. Journal of Electrical Engineering & Technology, 16(2), 467-478.

[38] Haeussermann, H., Scharf, S., & Meyer, R. (2022). Optimizing wind turbine operations using AI: The ENERCON case study. Renewable Energy, 182, 1227-1235.

[39] Hossain, M. S., Rahman, M. M., & Islam, M. N. (2022). Financial Barriers in Microgrid Development: Case Studies and Recommendations. Renewable and Sustainable Energy Reviews, 161, 112297.

[40] Ihenacho, E., & Nwachukwu, O. (2021). Enhancing Tax Compliance in Nigeria: The Role of Standardized Procedures. African Journal of Economic and Management Studies, 12(3), 379-392.

[41] Ikusika, B. (2022). Solutions To The Problems of Legal Education In Nigeria. *Available at SSRN 4161222*.

[42] Jang, K., Yang, H., & Kim, S. (2022). Economic Benefits of Microgrids: A Case Study of Local Industries and Businesses. Energy Economics, 106, 105812.

[43] Jensen, J., Koster, C., & Martin, T. (2022). Employment Generation through Microgrid Development: Opportunities and Challenges. Renewable and Sustainable Energy Reviews, 158, 112102.

[44] Johnson, L., & Thompson, R. (2021). Best Practices in Tax Administration: Lessons from Singapore and Germany. Global Journal of Taxation, 16(2), 82-96.

[45] Johnson, R., & Thompson, L. (2021). Engaging stakeholders in tax reform: A case study of Nigeria. Journal of Public Policy and Administration, 15(2), 112-130. doi:10.1016/j.jppa.2021.07.002

[46] Jones, C., Nair, S., & Ahmed, S. (2022). Regulatory Challenges in Implementing Microgrids: A Review of Policy and Practice. Energy Policy, 167, 113095.

[47] Joseph, A. A., Joseph O. A., Olokoba B.L., & Olatunji, O.A. (2020) Chronicles of challenges confronting HIV prevention and treatment in Nigeria. Port Harcourt Medical Journal, 2020 14(3) IP: 136.247.245.5

[48] Joseph, A.A, Fasipe O.J., Joseph O. A., & Olatunji, O.A. (2022) Contemporary and emerging pharmacotherapeutic agents for the treatment of Lassa viral haemorrhagic fever disease. Journal of Antimicrobial Chemotherapy, 2022, 77(6), 1525–1531 https://doi.org/10.1093/jac/dkac064

[49] Joudeh, M., & El-Hawary, M. E. (2022). Blockchain-based energy management systems: A comprehensive review. IEEE Access, 10, 111250-111268.

[50] Kang, H., Liu, J., & Yang, Y. (2021). IoT-based real-time data analytics for solar microgrid systems: A case study of SolarCity. Renewable Energy, 164, 908-917.

[51] Kaunda, J. S., Muliokela, G., & Kakoma, J. (2021). Microgrids and Rural Electrification: Opportunities and Challenges in Africa. Energy Policy, 155, 112382.

[52] Kavassalis, S., Munoz, J., & Sarigiannidis, P. (2021). Technical Challenges and Solutions for Microgrid Development: A Review. Journal of Cleaner Production, 299, 126941.

[53] Kshetri, N. (2021). 1 Blockchain's roles in addressing energy market challenges. In Blockchain-Based Smart Grids (pp. 1-20). Routledge.

[54] Kumar, N. M., Mathew, M., & Chand, A. (2021). Role of 4IR technologies in the energy sector: A review. Energy Reports, 7, 118-129.

[55] Kumar, P., Gupta, A., & Singh, R. (2022). Enhancing educational outcomes through renewable energy access: A case study. Educational Technology Research and Development, 70, 877-894.

[56] Kwakye, J. M., Ekechukwu, D. E., & Ogbu, A. D. (2019) Innovative Techniques for Enhancing Algal Biomass Yield in Heavy Metal-Containing Wastewater.

[57] Lee, K., Yang, S., & Zhao, Q. (2021). Impact of renewable energy on local business development: Evidence from microgrid installations. Journal of Cleaner Production, 295, 126447.

[58] Li, J., Li, X., & Wang, X. (2022). IoT-Based Smart Microgrid Systems: Monitoring and Control Strategies. IEEE Internet of Things Journal, 9(3), 1921-1933.

[59] Liu, Y., Zhang, Q., & Xie, L. (2020). A Review of Microgrid Operation and Control Strategies. IEEE Transactions on Power Delivery, 35(3), 1522-1531.

[60] Luthra, S., Kumar, S., & Saini, R. P. (2021). Renewable energy microgrids: A review of operational and technical considerations. Renewable and Sustainable Energy Reviews, 131, 110083.

[61] Miller, D., Chiu, A., & Zhang, Y. (2022). Financing Renewable Energy Microgrids in Developing Countries: Challenges and Opportunities. Energy Policy, 162, 112-124. https://doi.org/10.1016/j.enpol.2021.112071

[62] Miller, J., Nyathi, B., & Mahendran, N. (2022). Policy Frameworks for Scaling Microgrids in Sub-Saharan Africa. Energy Research & Social Science, 85, 102341.

[63] Miller, M., Thompson, R., & Smith, J. (2022). Rural industrialization and agricultural productivity through renewable energy microgrids. Agricultural Systems, 195, 103287.

[64] Ming, J., Lin, Q., & Zhao, Z. (2022). Blockchain Technology for Microgrid Energy Transactions: Challenges and Opportunities. Energy Reports, 8, 1557-1574.

[65] Ming, J., Zhao, R., & Xu, T. (2022). Blockchain for Energy Transactions: Opportunities and Challenges in Microgrid Systems. IEEE Transactions on Smart Grid, 13(4), 2952-2964.

[66] Moksnes, N., Roesch, M., & Berghmans, N. (2019). The Role of Blockchain and 4IR Technologies in Decentralizing Energy Systems: Opportunities and Challenges. Energy Policy, 138, 111210.

[67] Moses, I., & Olusola, F. (2021). Leveraging Technology for Tax Compliance: Insights and Recommendations for Nigeria. Journal of Financial Regulation and Compliance, 29(1), 55-68.

[68] Moses, K., & Olusola, T. (2021). Public sector tax administration and reform in Nigeria: An analysis of current challenges and strategies. International Journal of Public Sector Management, 34(1), 54-73. doi:10.1108/IJPSM-06-2020-0163

[69] Murray, G., & Nair, S. (2021). Blockchain for decentralized energy trading: Insights from the Brooklyn Microgrid project. Energy Policy, 157, 112478.

[70] NERC (Nigerian Electricity Regulatory Commission). (2022). Annual Report. (https://www.nerc.gov.ng).

[71] Njeri, N., Mwangi, S., & Kimani, S. (2022). Economic benefits of renewable energy microgrids in rural Kenya: A quantitative analysis. Energy Policy, 164, 112822.

[72] Nwachukwu, C., & Olugbenga, A. (2021). A phased approach to tax reform: Lessons from Nigerian implementation experiences. Review of Economic and Business Studies, 13(2), 99-116. doi:10.1080/2156824X.2021.1910531

[73] Nwachukwu, S., & Olugbenga, A. (2021). Navigating Tax Compliance: Challenges and Opportunities in Nigeria's Private Sector. Journal of Business and Finance, 13(2), 143-158.

[74] Nwogugu, M. (2022). Integrating Technology in Tax Administration: Lessons from International Practices. Journal of Financial Regulation and Compliance, 30(2), 205-220.

[75] Ochieng, R., Otieno, F., & Kiprono, S. (2022). Integration of IoT for Efficient Solar Microgrid Management in Rural Kenya. Renewable Energy, 188, 1157-1165.

[76] Oduntan, A. O., Olatunji, O. O., & Oyerinde, T. (2021). Microgrids for Sustainable Rural Electrification in Nigeria: A Review. Energy Reports, 7, 1557-1569.

[77] Ogunleye, O. (2020). Phased implementation of tax reform models: Evidence from developing countries. Journal of Development Economics, 13(1), 78-91. doi:10.1016/j.jdevel.2020.01.005

[78] Ogunleye, T. (2020). Revenue Collection Challenges in Nigeria: The Impact of Procedural Inconsistencies. Journal of Public Policy and Administration, 29(3), 95-110.

[79] Ogunleye, T., & Okunade, A. (2021). A Framework for Standardizing Tax Procedures in Developing Economies: Insights for Nigeria. Journal of Tax Administration, 7(1), 54-68.

[80] Okafor, C. (2020). The Challenges of Tax Administration in Nigeria: A Review. International Journal of Tax Research, 18(4), 145-159.

[81] Ozowe, W. O. (2018). *Capillary pressure curve and liquid permeability estimation in tight oil reservoirs using pressure decline versus time data* (Doctoral dissertation).

[82] Ozowe, W. O. (2021). *Evaluation of lean and rich gas injection for improved oil recovery in hydraulically fractured reservoirs* (Doctoral dissertation).

[83] Ozowe, W., Quintanilla, Z., Russell, R., & Sharma, M. (2020, October). Experimental evaluation of solvents for improved oil recovery in shale oil reservoirs. In *SPE Annual Technical Conference and Exhibition?* (p. D021S019R007). SPE.

[84] Ozowe, W., Russell, R., & Sharma, M. (2020, July). A novel experimental approach for dynamic quantification of liquid saturation and capillary pressure in shale. In *SPE/AAPG/SEG Unconventional Resources Technology Conference* (p. D023S025R002). URTEC.

[85] Ozowe, W., Zheng, S., & Sharma, M. (2020). Selection of hydrocarbon gas for huff-n-puff IOR in shale oil reservoirs. *Journal of Petroleum Science and Engineering*, *195*, 107683.

[86] Patterson, M., Scott, J., & Park, J. (2022). Policy Uncertainty and Its Impact on Microgrid Deployment in Emerging Economies. International Journal of Electrical Power & Energy Systems, 133, 107070.

[87] Peter, C. (2021). Social innovation for sustainable urban developmental transitions in Sub-Saharan Africa: Leveraging economic ecosystems and the entrepreneurial state. *Sustainability*, *13*(13), 7360.

[88] Quintanilla, Z., Ozowe, W., Russell, R., Sharma, M., Watts, R., Fitch, F., & Ahmad, Y. K. (2021, July). An experimental investigation demonstrating enhanced oil recovery in tight rocks using mixtures of gases and nanoparticles. In *SPE/AAPG/SEG Unconventional Resources Technology Conference* (p. D031S073R003). URTEC.

[89] Zeph-Ojiako, C. F., & Anakwuba, B. W. (2019). Promoting the image of Africa through media: the role of African leaders (case study of Nigeria). *UJAH: Unizik Journal of Arts and Humanities*, *20*(3), 80-98.

[90] Zhang, P., Ozowe, W., Russell, R. T., & Sharma, M. M. (2021). Characterization of an electrically conductive proppant for fracture diagnostics. *Geophysics*, *86*(1), E13-E20.