Legal Issues Concerning of Data Security and Privacy in Automated Income Tax Systems in Nigeria

Paul Atagamen Aidonojie¹, Toyin Afolabi Majekodunmi², Erebuonye Obieshi³, Isaac Ottah Ogbemudia⁴

**Article Abstract**

The adoption of automated income tax systems in Nigeria has ushered in a new era of efficiency and transparency, offering promising prospects for streamlined tax administration. However, the absence of comprehensive data protection legislation and potential cybersecurity threats pose significant challenges. The legal landscape surrounding data security and privacy in the context of automated tax systems necessitating an in-depth exploration of this study. This study aims to analyze the prospects and legal challenges associated with data security and privacy in the implementation of automated income tax systems in Nigeria. The study employs a multi-faceted methodology, combining a thorough review of existing literature and an analysis of relevant legal frameworks. Additionally, 303 questionnaires were distributed to respondents to ascertain insights concerning the prospect of automated income tax and cybersecurity measures in place concerning data security and privacy. The study found that there are several prospects associated with automated income tax systems, including increased efficiency, transparency, and enhanced revenue collection. However, legal challenges are identified, such as the lack of comprehensive data privacy legislation, cybersecurity threats, and control. The study therefore concludes that, while automated income tax systems offer significant benefits, addressing the legal challenges is paramount for their successful implementation. The study recommends the urgent enactment of comprehensive data protection legislation, the implementation of robust cybersecurity measures, and increased public awareness programs. Additionally, guidelines for international data transfer should be established to ensure the privacy and security of taxpayer information.

**Keywords:** Legal; Data Security; Privacy; Automated Tax; Nigeria

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Introduction

Taxation is an age-old societal practice (Omodero and Dandago, 2019), and it forms the bedrock upon which developed societies build their progress and advancement (Adgbonika, 2012). It serves as the primary source from which governments derive revenue, a crucial element contributing to the fulfilment of citizens' needs. In the context of Nigeria, taxation assumes a paramount role in revenue generation, particularly for the Federal, State, and Local Governments (Adediran et al, 2013). The historical roots of taxation are intertwined with the evolution of societies. It stands as the fundamental means by which governments amass funds to allocate resources (Aidonojie, 2023), provide public goods, and enhance infrastructure for their citizens (Konstantinos, 2018). Taxation's pivotal role is underscored by the fact that it is the lifeblood of governments (Omodero, 2019), enabling them to implement policies and programs that improve the quality of life for their constituents (Modugu and Alade, 2013). As an integral tool, taxation enables governments to achieve their objectives, thereby fostering the overall development of society. However, a recurring challenge emerges in the form of tax avoidance and evasion (Adejumo, 2013) in Nigeria, as individuals and businesses often resort to evasive tactics, exploiting gaps in the tax code or deliberately neglecting their tax obligations (Ademiyi and Folayan, 2018). This phenomenon hampers the ability of the government to effectively provide essential services and fulfil its obligations to citizens. Multiple factors contribute to this issue. The tax burden in Nigeria is perceived as excessive by some, leading to resistance and evasion. Additionally, a lackadaisical attitude toward tax payment among citizens exacerbates the problem (Abdulrazaq, 2005). This collectively diminishes the government's revenue and compromises its capacity to address pressing societal needs, thereby impeding the state's overall development (Adebisi and Gbegi, 2013).

However, in the face of the ongoing digital revolution, Nigeria has taken significant strides towards the modernization of its income tax systems, marking a pivotal moment in the country's journey toward technological advancement. The advent of automation in tax administration signifies a transformative shift from traditional manual processes to streamlined, digitally-driven mechanisms. This strategic move aligns with the global trend where nations are increasingly leveraging technology to optimize governance and economic systems (Aidonojie et al., 2022). In the context of income tax, the integration of automation not only represents a
commitment to efficiency but also underscores the government's dedication to fostering transparency and improving the overall effectiveness of revenue collection. The transition to automated income tax systems in Nigeria brings forth a myriad of anticipated benefits (Ofurum, 2018). Efficiency stands out as a key advantage, as automation streamlines and accelerates processes that were once laborious and time-consuming. This newfound efficiency translates into quicker and more accurate tax assessments, reducing the burden on both taxpayers and tax administrators. Additionally, the integration of automation enhances transparency in the tax collection process, providing a clear and auditable trail of financial transactions. This transparency not only instills trust among taxpayers but also aids authorities in combating tax evasion, ensuring a fair and equitable distribution of the tax burden. Furthermore, the move towards automated income tax systems in Nigeria holds the potential to revolutionize revenue collection (Aidonojie et al., 2023). By leveraging digital technologies, the government can capture a more comprehensive and accurate picture of the taxpayers' financial activities. This, in turn, facilitates more precise assessments and contributes to the expansion of the tax base. As the country embraces the opportunities presented by automation, it positions itself at the forefront of a technological transformation that not only improves administrative processes but also reinforces the integrity of the income tax system.

However, as Nigeria embraces these technological advancements, a crucial aspect that demands thorough scrutiny is the potential impact on data security and privacy. This is concerning the fact that the susceptibility of automated systems to cyber threats further heightens the urgency for a robust legal infrastructure. As the government endeavors to modernize its income tax systems, it must concurrently bolster the legal frameworks that govern the security and privacy of the amassed data (Aidonojie P.A. et al 2023). Addressing potential legal challenges becomes imperative to build public trust and ensure compliance. Striking the right balance between technological innovation and data protection requires a comprehensive legislative approach that anticipates and mitigates the evolving risks associated with the increasing reliance on automated income tax systems (Aidonojie et al., 2021). By navigating these challenges effectively, Nigeria can position itself as a trailblazer in the responsible integration of technology into tax administration, setting a precedent for secure and privacy-conscious digital governance.
It is concerning the above that this study aims to unravel the dual narrative of promise and peril surrounding the implementation of automated income tax systems in Nigeria. By delving into the prospects these systems offer, juxtaposed against the legal intricacies, it seeks to provide a comprehensive understanding of the implications for data security and privacy. Furthermore, through an examination of existing legal frameworks, cybersecurity measures, and the broader implications for taxpayers. In this regard, this research endeavors to contribute insights that can inform the development of a robust and privacy-centric foundation for automated tax systems in Nigeria.

Method

In the examination of the potential and legal challenges related to Data Security and Privacy in Automated Income Tax Systems in Nigeria, a detailed research methodology has been devised to ensure a thorough and ethical investigation. The approach chosen integrates both doctrinal and non-doctrinal strategies to comprehensively address the issues surrounding data security and privacy in automated income tax systems in Nigeria. The doctrinal aspect involves a meticulous examination of primary legal sources pertinent to data protection and privacy laws within the context of automated income tax systems. This encompasses a detailed analysis of existing laws, regulations, and legal precedents concerning the handling of sensitive taxpayer information in Nigeria. Additionally, scholarly literature is thoroughly reviewed to gain insights into the evolving legal discourse surrounding data security and privacy issues in the domain of automated income tax systems.

In addition to the doctrinal approach, the non-doctrinal method is implemented to collect firsthand perspectives from key stakeholders. Utilizing an online questionnaire survey through platforms like Google Forms serves as the primary tool for data collection. This method is structured to capture the opinions and experiences of individuals directly involved in or impacted by automated income tax systems in Nigeria, including tax authorities, cybersecurity experts, and taxpayers. The analysis of data obtained from the survey follows a descriptive and analytical systematic method, aiming to distill meaningful insights into the potential and legal challenges faced by stakeholders in ensuring data security and privacy. The systematic approach ensures a structured evaluation of responses, identifying trends, concerns, and potential solutions.
Complementary to the doctrinal and systematic approach, the non-doctrinal method seeks to illuminate the practicalities and real-world implications of data security and privacy issues within automated income tax systems. It sheds light on challenges faced by various stakeholders and proposes potential enhancements to the existing legal framework. The synthesis of findings from both the doctrinal and non-doctrinal research methods forms the basis for well-informed conclusions and recommendations. This comprehensive approach ensures a nuanced understanding of the potential and legal intricacies related to data security and privacy in the implementation of automated income tax systems in Nigeria. It facilitates the development of effective and targeted recommendations for policymakers and relevant stakeholders without resorting to plagiarism.

Discussion


Taxation has been an integral part of human history and societal organization. Its presence can be traced across various countries throughout the ages. In Nigeria, the roots of taxation extend back to the pre-colonial era, involving different settlements and cities (Zakariya et al., 2015). The direct taxation method in Nigeria was introduced by Lord Luggard in 1904 (Hatfield, 2012). Post-independence, taxes have consistently served as a crucial revenue source for both the national and state governments, funding essential public services. Individuals and corporate entities with assets or income generation responsibilities are obligated to contribute taxes to the Nigerian government. Nigeria operates under a three-tier system of government, encompassing local, state, and federal levels (Scarcella, 2019). The laws governing taxation delineate the specific areas where each government tier is authorized to collect taxes from both individuals and companies. The Taxes and Levies Act further elucidates the powers granted to governments for tax collection (Oladipo et al., 2019). In this context, state governments in Nigeria are empowered to collect various forms of revenue, including Personal Income Tax (PIT), capital gains tax from the profit derived from the sale of movable and immovable property by residents, stamp duties on individual contractual agreements, solid minerals revenue, road tax, gaming tax, Solid Minerals Haulage tax, and right of occupancy fees from individuals.
In several Nigerian states, there is a prevalent pattern observed among taxpayers where they strive to reduce their tax obligations or outrightly neglect their tax responsibilities (Ayua, 1996). This pursuit typically involves legal avenues of tax avoidance or the illicit act of tax evasion. It is important to note that multiple factors contribute to tax avoidance and evasion within the different states of Nigeria, with some causes being commonly shared among them. These factors include:

- Ineffectiveness and inefficiency in tax management methods.
- Limited access to information regarding taxpayers' assets and income, exacerbated by the absence of a comprehensive taxpayer database.
- Inadequacies in the mechanisms used for assessing and collecting taxes.
- Widespread corruption among both tax officials and taxpayers.
- A nonchalant and indifferent attitude among taxpayers towards fulfilling their tax obligations.
- Complaints that tax revenue is not utilized for the development and provision of basic amenities.

Regardless of the specific reasons for tax avoidance and evasion in various Nigerian states, these practices undeniably harm the states' ability to generate essential revenue for addressing their needs. Despite the presence of laws and legal decisions aimed at curbing these practices (Odiimma, 2022), achieving a fair and equitable approach to managing tax issues among taxpayers remains a persistent challenge. It's worth noting that the issues of tax avoidance and evasion are not isolated to the taxing framework of some state alone (Akwe, 2014). These challenges extend to the federal level and are experienced by various other states within the country. To combat and reduce instances of non-compliance in tax payments by taxpayers while also expanding the tax base across Nigeria, the implementation of an electronic tax system has been adopted as a substantial solution (James and Moses, 2012). This step aims to rectify the inherent challenges ingrained in the nation's tax system.

Nevertheless, it is important to note that the world is rapidly evolving into a global village, increasingly shaped by digital advancements (Aidonojie et al., 2021). Technology has played a pivotal role in addressing challenges across various sectors worldwide (Aidonojie P.A. et al 2023). Consequently, many countries have embraced digital technology to overhaul their traditional manual tax systems (Aidonojie et al., 2022). This shift involves the adoption of a digital tax system, offering a platform that allows taxpayers to engage in the following activities, E-registration of eligible
taxpayers, E-filing of taxpayer returns, E-tax assessment, and E-payment of assessed taxes and generation of tax receipts.

Given the persistent challenges of tax evasion within the tax systems of Nigerian states, state governments have, over time, introduced and implemented an automated personal income tax system. While the primary goal is to combat tax evasion, the digital tax system has also contributed to improvements in transparency, accountability, and increased revenue generation. The automated Personal Income Tax (PIT) system encompasses the following features (Aidonojie et al., 2022), briefly discussed below:

First, Electronic Capture of Taxpayer Data. This process entails gathering essential bio-data from taxpayers, including their full name, business nature, address (either business or home), and mobile number. While this information is typically collected manually by internal revenue staff or contracted personnel, this initial step is crucial to ensure the accurate input of taxpayer details into the technological system for subsequent processing.

Second, Profiling and E-Registration of Taxpayer. The profiling and registration of a taxpayer involve conducting an interview to obtain vital information before registering or inputting the taxpayer's details into the state revenue automated system. During the interview, the taxpayer may be required to provide the following information: detailed bio-data of the taxpayer, expenditure details of the taxpayer, and business structure information. Specific details regarding the structure of the business include: (i) Nature of the business; (ii) Size of the business; (iii) Level of turnover/sales volume; and (iv) Bank statement.

In cases where the taxpayer owns a school, additional information is needed, such as the total number of students in each class, fees paid, staff numbers, staff salary structure, and the bank statement of the account. Once obtained, this information is uploaded to the Revenue Automated System, and the taxpayer is considered registered. A text message is sent to the taxpayer's mobile phone, confirming registration and providing a unique Revenue Identification Number (RIN). The RIN serves as a distinct identifier for accessing tax details on the Electronic Revenue Automation System (ERAS). In cases where a registered taxpayer cannot produce their RIN, the phone number used during registration on ERAS serves as an alternative. Additionally, the automated tax system allows eligible taxpayers not yet in the tax net to register themselves through the automated platform.
Third, E-computation and Notification of Tax Assessment on Taxpayer Income. By the Personal Income Tax Act, the assessment of taxpayer income can be conducted either by the taxpayer or the relevant tax authority. However, the Revenue Automated System does not allow for self-assessment by the taxpayer. The computation of an assessment through the automated income tax system is overseen by the relevant tax authority to which the taxpayer has filed a return. The taxpayer's income is typically calculated using the formula outlined in the schedule of the Personal Income Tax Act. In cases where the taxpayer fails to submit a return within the specified timeframe, the tax on their income is determined based on the best judgment of the tax officer. Once the assessment is computed through the automated tax system, the taxpayer receives notification of the due tax through a text message (SMS).

Fourth, E-Payment of Tax. Upon receiving the assessment notice, the taxpayer is obligated to make payment through bank deposit or electronic means. Payment of the assessed tax must be completed within two months of receiving the assessment notice.

The diagram below illustrates the flow of an automated income tax system in Edo State, reflecting a structure similar to that of various states in Nigeria.

**Chart 1. Diagrammatic Process of Edo State Revenue Automated System Under Direct Assessment of Personal Income Tax**

Concerning the above, it suffices to state that it characterizes the procedure involved in an automated personal income tax states revenue sector in Nigeria. In this
regard, the above digital procedure involved in the state personal income taxing system is said to aid in curbing tax evasion. This is concerning the fact that it provides for the following futures that aid in savaging tax evasion.

2. Prospects of Automated Income Tax Systems in Nigeria

In the ever-evolving landscape of fiscal governance, the prospects of automated income tax systems in Nigeria stand poised to usher in a new era of efficiency and transparency. This transformative shift not only promises to enhance the precision and accountability of tax administration but also holds the key to unlocking increased revenue and broadening the tax base. In this regard, it will be relevant to examine some of the prospects of an automated income tax system in Nigeria:

a. The integration of automated tax systems holds the potential to revolutionize tax administration in Nigeria, significantly elevating both efficiency and accuracy.

b. Embracing automation fosters transparency within tax-related transactions.

c. The implementation of automation facilitates timely and accurate tax collection, thereby bolstering the government's revenue stream.

d. The advent of automated tax systems presents an opportunity to expand the tax base, bringing more individuals and entities into the formal tax net.

e. Automation acts as a robust deterrent against tax evasion and avoidance.

f. The wealth of data generated through automated tax systems becomes a valuable resource for sophisticated analytics.

3. Legal Framework on Data Security and Privacy in Automated Income Tax Systems in Nigeria

The legal framework surrounding data security and privacy in automated tax systems is of paramount importance in the context of Nigeria's evolving digital landscape. As the nation embraces technology to enhance tax administration, safeguarding sensitive taxpayer information becomes a critical aspect of governance. This framework delineates the rules and regulations governing the collection, processing, and protection of personal and financial data within automated tax systems. It aims to strike a balance between facilitating efficient tax operations and ensuring the confidentiality, integrity, and availability of individuals' information. In navigating the complexities of automated tax systems, this legal framework serves as a guide to uphold ethical data practices, foster public trust, and comply with international standards for data security and privacy. In this regard, it will be relevant
to consider some of these laws as they concern data security and privacy in automated income tax system in Nigeria.

In the context of the legal framework governing data security and privacy in automated income tax systems in Nigeria, a central role is played by the Constitution of the Federal Republic of Nigeria. Specifically, Section 37 of the Constitution underscores a crucial aspect of this framework, highlighting the constitutional assurance of the right to privacy. This foundational element holds considerable significance in protecting sensitive financial information within the scope of income tax systems. Section 37 establishes a constitutional right to privacy, covering the safeguarding of personal information, including financial data related to income tax. This constitutional provision recognizes the inherent sensitivity of financial information and underscores the importance of maintaining its confidentiality and security. The acknowledgment of the right to privacy within the Constitution serves as the foundation for ensuring that measures taken to ensure compliance with income tax laws align with overarching constitutional principles.

In light of the above, within the realm of data security and confidentiality in income tax systems, this constitutional guarantee implies that regulatory bodies and tax authorities must navigate the legal landscape with due consideration for the constitutional right to privacy. Compliance with income tax laws should be conducted in a manner that respects and upholds this fundamental right. The constitutional provision acts as a legal anchor, guiding the development and enforcement of income tax laws and regulations in Nigeria. Consequently, compliance efforts within income tax systems, especially concerning data security and confidentiality, should align with this constitutional guarantee. This underscores the need for balanced and legally sound approaches, ensuring that robust data security measures do not compromise the privacy rights of individuals. The constitutional framework provides a foundational basis for legal and policy developments in the realm of income tax information, directing stakeholders toward a harmonious integration of data security, confidentiality, and the protection of individual privacy within the Nigerian automated income tax system.

Also, the enactment of the Nigeria Data Protection Act in 2023, specifically on June 12, marks a substantial contribution to the legal framework overseeing data security and privacy within automated income tax systems in Nigeria. This legislative initiative aims to establish comprehensive regulations governing the processing of data.
personal data, with a primary focus on safeguarding the rights of data subjects. In the realm of automated income tax systems, Section 24(1) of the Act assumes a pivotal role, delineating essential guidelines for data processors. It mandates that these processors ensure the fair, lawful, and transparent processing of personal data, emphasizing adherence to ethical standards and legal principles throughout the data processing lifecycle. Furthermore, Section 24(2) delves into the technical dimensions of data processing, stressing the imperative for data processors to implement appropriate technical measures. These measures are intricately designed to ensure the confidentiality, integrity, and availability of individual personal data. This section recognizes the indispensable role of technology and security measures in safeguarding sensitive information. The emphasis on confidentiality aims to preserve the privacy of personal data and protect it from unauthorized access, while the importance of integrity and availability underscores the need to maintain the accuracy and accessibility of such data. The Nigeria Data Protection Act of 2023, in this context, responds to the demand for a comprehensive and contemporary legal framework for data protection in the country, particularly within the sphere of automated income tax systems. Sections 24(1) and 24(2) distinctly articulate the ethical and technical standards that data processors must adhere to, fostering fairness, transparency, and secure processing of personal data to uphold the rights and privacy of data subjects.

However, it is crucial to highlight Section 28 within the legal framework, emphasizing the responsibility placed on data processors to conduct regular data privacy assessments. This provision is designed to proactively identify potential risks or consequences associated with the processing of individual personal data, ensuring alignment with data protection principles and regulations. The process involves a systematic examination to assess if these activities pose any risks to the rights and freedoms of individuals whose data is being processed. The proactive nature of Section 28 underscores the importance of regular assessments, requiring data processors to remain vigilant and address issues preemptively during data processing. In essence, this section promotes a proactive approach to data protection, encouraging data processors to be diligent in identifying and mitigating risks to protect the privacy and rights of individuals. This aligns with the broader objective of the legal framework, which aims to establish a robust and proactive approach to data protection, considering evolving technological landscapes and privacy challenges. Within the legal framework, a notable addition concerns the regulation of Sensitive Personal Data.
processing. This aspect outlines specific conditions under which data processors can engage in the processing of such sensitive information. As per the legal framework:

a. Consent: Explicit consent must be obtained from the data subject, and this consent should not be withdrawn.

b. Legal Rights and Obligations: Processing is considered necessary to fulfill the rights or obligations of the data controller or the data subject under relevant laws.

c. Vital Interests: Processing is acceptable when necessary to protect the vital interests of the data subject or another individual, especially when the data subject is physically or legally incapable of providing consent.

d. Legal Claims and Proceedings: Processing is permitted for the establishment, exercise, or defense of a legal claim, obtaining legal advice, or conducting a legal proceeding.

e. Public Interest: Sensitive data processing is justified when necessary for a substantial public interest, with utmost consideration for the fundamental human rights of the data subject.

This comprehensive framework within the legal landscape demonstrates a commitment to balancing the need for processing sensitive personal data with ethical and legal safeguards. It ensures responsible and ethical handling of such data within the automated income tax systems in Nigeria.

Furthermore, the Nigerian Data Protection Regulation (NDPR), introduced in 2019, is a crucial element within the legal framework overseeing data security and privacy in automated income tax systems in Nigeria. Regulation 1.1 of the NDPR outlines the fundamental objectives of the regulation, including:

a. Safeguarding the Rights of Natural Persons to Data Privacy: A primary aim of the NDPR is to establish and uphold individuals’ rights to privacy concerning their data.

b. Fostering Safe Conduct for Transactions Involving the Exchange of Personal Data: The regulation seeks to establish a framework that promotes secure and ethical practices in transactions where personal data is exchanged.

c. Preventing Manipulation of Personal Data: Another core objective is to prevent any unauthorized or malicious manipulation of personal data, ensuring its integrity and protecting individuals from misuse.
Within the NDPR, personal data is broadly defined to include various types of information, such as a person's photo, email address, bank details, and more. This comprehensive definition acknowledges that various forms of information contribute to an individual's identity in the modern digital landscape. The NDPR establishes a legal framework that recognizes the importance of safeguarding personal data and outlines clear objectives to guide its implementation. This regulation addresses the challenges posed by evolving technologies and data-driven practices, aligning with global efforts to protect privacy rights in an increasingly interconnected world. In connection with the information provided above, Regulation 2.5 sets forth explicit guidelines concerning the display of privacy policies for any medium involved in the collection or processing of Personal Data within the context of automated income tax systems. Regardless of any conflicting provisions within this Regulation or any other current instrument, the medium must present a privacy policy that is simple and easily comprehensible by the targeted class of Data Subjects. The privacy policy, as mandated by Regulation 2.5, is required to include the following key elements: (i) Data Subject's Consent; (ii) Description of Collectable Personal Information; (iii) Purpose of Collection of Personal Data; (iv) Technical Methods Used for Collection and Storage; (v) Access by Third Parties to Personal Data; (vi) Available Remedies for Privacy Policy Violation; (vii) Time Frame for Remedy; and (viii) No Limitation Clause for Breach of Principles.

Fundamentally, within the context of data security and privacy in automated income tax systems in Nigeria, Regulation 2.5 underscores the crucial nature of clear and understandable privacy policies. It outlines specific components that must be included to ensure adequate information for Data Subjects, cultivating a culture of responsible and ethical data handling aligned with the principles set out in the Regulation. However, distinct provisions governing the acquisition of data are detailed in Regulation 2.3(1) and (2), placing significant emphasis on transparently disclosing the explicit purpose of data collection to the Data Subject. The responsibility lies with the Data Controller to ensure that consent obtained from a Data Subject is genuine, free from any fraudulent, coercive, or undue influences. Additional guidelines within Regulation 2.3(2)(a) and (b) are established for situations where a Data Subject's consent is embedded in a written declaration covering other matters. In such cases, the request for consent must be presented distinctly, easily distinguishable, and communicated clearly and comprehensibly, ensuring that Data Subjects are fully aware of the nature of their consent. If any part of the declaration violates the regulation, it is
considered non-binding on the Data Subject. Furthermore, prior to granting consent, the Data Subject must be informed of their right to withdraw consent at any time. Importantly, the withdrawal of consent does not retroactively affect the lawfulness of processing based on the initial consent. Turning to Regulation 2.6, it mandates that individuals engaged in data processing or control implement robust security measures to safeguard data. These measures encompass various aspects, including protecting systems against unauthorized access, establishing firewalls, securely storing data with restricted access, employing encryption technologies for secure data transmission, formulating organizational policies for handling Personal Data and other sensitive information, ensuring the security of email systems, and providing ongoing capacity-building initiatives for staff.

In essence, Regulations 2.3 and 2.6 collectively underscore the principles of transparency, informed consent, and data security within the realm of data protection within the automated income tax system. While the former ensures that Data Subjects are fully informed and willingly consent to data processing, the latter stresses the importance of implementing robust security measures to fortify against potential breaches. Together, these regulations contribute to constructing a framework prioritizing ethical data practices, safeguarding individual rights, and fostering a secure environment for the processing of personal information.

4. Legal Challenges on Data Security and Privacy in Automated Tax Systems in Nigeria

The landscape of automated tax systems in Nigeria has undergone a significant transformation with the incorporation of digital technologies. This evolution aims to optimize tax processes, enhance operational efficiency, and improve overall effectiveness. However, this digital transition is accompanied by a myriad of legal challenges, particularly in the realms of data security and privacy. In this regard, it will be pertinent to examine the legal impediments associated with establishing robust data protection measures within the automated tax systems in Nigeria as follows.

First, Data Privacy Legislation. Nigeria lacks comprehensive data protection legislation, which poses a significant challenge in safeguarding taxpayer information. The absence of stringent laws can lead to potential misuse of sensitive data, raising concerns about privacy violations.

Furthermore, Implementation Challenges. Implementation challenges may arise in adhering to the ethical and technical standards outlined in Sections 24(1) and
24(2) of the Nigeria Data Protection Act, especially in the rapidly evolving landscape of technology. Furthermore, the Act responds to the demand for a contemporary legal framework, but challenges may emerge in ensuring data processors consistently meet the outlined standards, given the dynamic nature of technology and security measures. Also, challenges may emerge in implementing NDPR's objectives, especially concerning preventing the manipulation of personal data, as technologies evolve, and new forms of data manipulation may arise. In this regard, while NDPR establishes a legal framework, challenges in preventing manipulation may require continuous adaptation to evolving technologies and practices to align with global efforts for privacy protection.

The Challenge of Compliance. Challenges may arise in ensuring compliance with Regulations 2.3 and 2.6, considering the broad spectrum of security measures and the need for consistent and transparent data acquisition practices. In this regard, while these regulations collectively underscore principles of transparency, informed consent, and data security, challenges may emerge in ensuring uniform compliance, especially in the face of evolving technological landscapes.

Challenge of Regular Data Privacy Assessments. Section 28 emphasizing regular data privacy assessments may pose challenges in terms of resources, methodologies, and the evolving nature of potential risks associated with data processing. Furthermore, the proactive nature of Section 28 highlights the importance of regular assessments. However, challenges may arise in maintaining vigilance and addressing issues preemptively, considering the complexities of data processing activities. Also, it must be noted that challenges may arise in balancing the conditions outlined for processing sensitive personal data, especially in situations where consent withdrawal is complex or in balancing public interest with individual rights.

Cybersecurity Threats. Automated tax systems are vulnerable to cyber threats such as hacking, phishing, and ransomware attacks. Inadequate cybersecurity measures can result in unauthorized access to taxpayer data, leading to breaches and compromising the confidentiality of personal and financial information.

Lack of Awareness and Education. Taxpayers may not be fully aware of the implications of sharing their information in automated systems. The lack of education about data security and privacy measures can contribute to inadvertent disclosure of sensitive details and expose individuals to identity theft or fraud.
Data Ownership and Control. Determining ownership and control of the data collected through automated tax systems is a legal challenge. Clear guidelines are needed to specify who owns the data, how it can be used, and the rights of taxpayers in controlling the access and use of their information.

International Data Transfer. With the increasing globalization of businesses, there is a need for clarity regarding the transfer of tax-related data across borders. Legal frameworks for international data transfer and cooperation are essential to ensure the privacy and security of taxpayer information in cross-border transactions.

5. Data Presentation and Analysis

This section is dedicated to the presentation and examination of the data acquired through the administration of questionnaires to the participants of the study. The systematic retrieval of information from the responses provided in the questionnaires is elaborated as follows:

First, about Sample Size and Sampling Techniques. To ensure a comprehensive and representative range of responses from individuals in Nigeria, the study aimed at a sample size of 303 respondents across diverse geopolitical zones. The selection of respondents utilized a simple random sampling method, chosen for its effectiveness in reaching a varied audience (Aidonojie et al., 2023; Imoisi and Aidonojie, 2023; Edetalehn and Aidonojie, 2023; Aidonojie et al., 2022; Aidonojie, 2023; Aidonojie et al., 2021; Aidonojie and Francis; 2022). This method offers several advantages (Edetalehn and Aidonojie, 2023; Aidonojie 2023; Idahosa et al., 2023; Aidonojie et al., 2022), including:

a. Simple random sampling excels in capturing diverse populations, ensuring a representative mix of individuals from various backgrounds.

b. Outcomes from simple random sampling are impartial and fair, minimizing the risk of bias and thereby enhancing the reliability of study results.

c. The simplicity of implementing simple random sampling adds practical value, making the research process more manageable and reducing complexity in respondent selection.

d. Simple random sampling proves effective in hybrid legal research, showcasing versatility in seamlessly integrating with diverse research approaches, especially those combining legal and empirical analyses.

In data analysis, the results obtained from the administered surveys underwent thorough analysis and have been represented using graphical and tabular formats.
This approach enhances clarity and streamlines the interpretation process, rendering the results easily understandable for a diverse audience.

**Figure 1.** Displays the domiciles of participants within the geopolitical divisions of Nigeria

Which of the following Geopolitical Zones in Nigeria do you reside in?

303 responses

![Geopolitical Zones Pie Chart]

**Table 1. Summary of the residential area of participants situated in the geopolitical regions of Nigeria**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Geopolitical Zones in Nigeria</th>
<th>Responses of Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>North Central</td>
<td>38</td>
<td>12.5%</td>
</tr>
<tr>
<td>2</td>
<td>North East</td>
<td>43</td>
<td>14.2%</td>
</tr>
<tr>
<td>3</td>
<td>North West</td>
<td>39</td>
<td>12.9%</td>
</tr>
<tr>
<td>4</td>
<td>South East</td>
<td>75</td>
<td>24.8%</td>
</tr>
<tr>
<td>5</td>
<td>South South</td>
<td>57</td>
<td>18.8%</td>
</tr>
<tr>
<td>6</td>
<td>South West</td>
<td>51</td>
<td>16.8%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>303</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Chart 1 and Table 1 Depict the acknowledgment of specific geopolitical zones in Nigeria, as reported by the respondents in the survey.

**Figure 2.** Depicts individuals expressing their knowledge of automated income tax systems

Are you conversant with the concept of automated income tax systems in Nigeria?

303 responses

![Automated Income Tax Systems Pie Chart]
Table 2. n accurate recapitulation of participants affirming their acquaintance with automated income tax

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>260</td>
</tr>
<tr>
<td>Valid No</td>
<td>43</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
</tr>
</tbody>
</table>

Chart 2 and Table 2 collectively confirms that respondents have familiarity with the automated income tax system.

**Figure 3. Prospect of automated income tax system in Nigeria**

Which of the following serves as the potential benefits of implementing automated income tax systems in Nigeria? You tick more than one option

264 responses

<table>
<thead>
<tr>
<th>Prospective Benefit</th>
<th>Cluster of Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased efficiency</td>
<td>200</td>
<td>75.8%</td>
</tr>
<tr>
<td>Enhanced transparency</td>
<td>143</td>
<td>54.2%</td>
</tr>
<tr>
<td>Increase in tax base</td>
<td>228</td>
<td>86.4%</td>
</tr>
<tr>
<td>Improved revenue collection</td>
<td>183</td>
<td>69.3%</td>
</tr>
<tr>
<td>It curtails the incidence of income tax invasion and avoidance</td>
<td>169</td>
<td>64%</td>
</tr>
</tbody>
</table>

Chart 3 and Table 3 are valid clusters that depict the prospect of an automated income tax system in Nigeria.

**Figure 4. Confirming if the Nigerian laws sufficiently address data protection in automated income tax systems**

Does the existing legal framework sufficiently address data security and privacy in the context of automated income tax systems in Nigeria?

264 responses
Table 4. Valid Confirmation if the Nigerian laws sufficiently address data protection in automated income tax systems

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Yes</td>
<td>117</td>
</tr>
<tr>
<td>Valid No</td>
<td>147</td>
</tr>
<tr>
<td>Total</td>
<td>264</td>
</tr>
</tbody>
</table>

Chart 4 and Table 4 are valid confirmations if the Nigerian laws sufficiently address data protection in automated income tax systems.

Figure 5. Identification of challenges of inadequate data protection in implementing automated income tax systems

Table 5. Valid cluster of identifying challenges of data protection in implementing automated income tax systems

<table>
<thead>
<tr>
<th>Challenges of data protection in implementing automated income tax systems</th>
<th>Cluster of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of privacy of taxpayer information in automated income tax systems, leading to potential unauthorized access and misuse.</td>
<td>101</td>
<td>62.3%</td>
</tr>
<tr>
<td>Without clear legal guidelines, the risk of data breaches increases, exposing sensitive taxpayer data to potential cyber threats and malicious activities.</td>
<td>140</td>
<td>86.4%</td>
</tr>
<tr>
<td>It results in challenge to enforce data protection measures, allowing for potential lapses in security and accountability.</td>
<td>155</td>
<td>95.7%</td>
</tr>
<tr>
<td>Absence of specific regulations may create challenges in managing cross-border data transfers, especially in international aspects of taxation and data sharing.</td>
<td>104</td>
<td>64.2%</td>
</tr>
<tr>
<td>Lack of clear legislation contributes to challenges in</td>
<td>89</td>
<td>54.9%</td>
</tr>
</tbody>
</table>
establishing proper guidelines for the retention of taxpayer data, leading to potential issues related to data storage and disposal.

| Without comprehensive legislation, there may be a lack of standardized security measures for automated income tax systems, making it difficult to ensure a consistent and high level of security across different platforms and implementations. | 93 | 57.4% |
| The absence of clear data protection laws can erode public trust in automated income tax systems, as taxpayers may be concerned about the security of their personal and financial information, potentially leading to resistance or hesitancy in adopting such systems. | 78 | 48.1% |

Chart 5 and Table 5 are valid clusters of identification of the challenges of data protection and privacy in implementing an automated income tax system in Nigeria.

**Figure 6. Identification of the possible remedies of data protection in automated income tax system**

How can the challenges posed by the absence of comprehensive data protection laws in implementing automated income tax systems be resolved? You can tick more than one option

163 responses

Table 6. Cluster of identification of the possible remedies for data protection in an automated income tax system

<table>
<thead>
<tr>
<th>Remedies of data protection in automated income tax system.</th>
<th>Cluster of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and enact comprehensive data protection laws to provide a legal foundation for safeguarding taxpayer information in automated income tax systems.</td>
<td>126</td>
<td>77.3%</td>
</tr>
<tr>
<td>Enforce strict cybersecurity standards to ensure all automated income tax systems adhere to high-security measures, reducing vulnerability to data breaches.</td>
<td>157</td>
<td>96.3%</td>
</tr>
<tr>
<td>Enhance legal mechanisms to enforce data protection measures, including clear consequences for non-compliance, fostering accountability, and discouraging security lapses.</td>
<td>142</td>
<td>87.1%</td>
</tr>
<tr>
<td>Implement stringent accountability measures for</td>
<td>61</td>
<td>37.4%</td>
</tr>
</tbody>
</table>
breaches or unauthorized access, holding responsible parties liable for security lapses in automated income tax systems.

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foster international cooperation and agreements on data protection to address cross-border challenges, facilitating secure data transfer and collaboration in globalized taxation.</td>
<td>109</td>
</tr>
<tr>
<td>Develop legislation with specific guidelines for the retention and secure disposal of taxpayer data, ensuring responsible storage practices.</td>
<td>103</td>
</tr>
<tr>
<td>Launch extensive public awareness programs to educate taxpayers and stakeholders about the security measures in place, building trust and encouraging the adoption of automated income tax systems.</td>
<td>70</td>
</tr>
</tbody>
</table>

Chart 6 and Table 6 Consist of responses from participants identifying potential solutions to the challenges associated with data protection in the automated income tax system in Nigeria.

6. **Discussion of Findings**

Figure 1 and Table 1 present data on the domiciles of participants within the geopolitical divisions of Nigeria. The findings show a distribution of respondents across the six geopolitical zones, with varying percentages. The South East had the highest representation at 24.8%, followed by the South-South (18.8%) and South West (16.8%). The North East, North West, and North Central regions also contributed to the survey, showcasing a diverse representation of participants from different parts of the country. Geopolitical diversity is essential for obtaining a comprehensive understanding of opinions on automated income tax systems. Regional variations in socio-economic factors and cultural nuances may influence perceptions and attitudes toward tax-related matters.

Figure 2 and Table 2 reveal the participants' knowledge of automated income tax systems. A significant majority (85.8%) confirmed their familiarity with automated income tax, while 14.2% indicated no acquaintance. These results suggest a considerable awareness and understanding among the respondents regarding automated income tax systems. In this regard, Figure 3 and Table 3 focus on the prospects of an automated income tax system in Nigeria. The participants express positive expectations, with high percentages across various clusters. Notably: (i) 86.4% anticipate an increase in the tax base; (ii) 75.8% expect increased efficiency; and (3) 69.3% foresee improved revenue collection.

These findings suggest that respondents perceive several potential benefits associated with the implementation of automated income tax systems, such as increased efficiency, transparency, and revenue generation. Furthermore, the favorable
outlook indicates that respondents perceive automated income tax systems as potentially beneficial for both tax authorities and taxpayers. This positive sentiment can influence the acceptance and successful implementation of such systems. However, Figure 4 and Table 4 investigate whether Nigerian laws adequately address data protection in automated income tax systems. The data indicates a split opinion, with 44.3% confirming that the laws do address data protection adequately, while 55.7% believe otherwise. This suggests a need for further exploration and potential improvements in legal frameworks related to data protection in the context of automated income tax systems. Furthermore, this divergence highlights a notable concern regarding the adequacy of existing legal frameworks. Addressing these concerns is crucial for fostering trust and ensuring the security of taxpayer information in automated systems. In this regard, Figure 5 and Table 5 outline challenges related to inadequate data protection in implementing automated income tax systems. They are as follows:

a. With a concerning high percentage of 62.3%, participants highlighted the lack of privacy for taxpayer information in automated income tax systems, emphasizing the potential for unauthorized access and misuse.

b. Significantly, 86.4% of respondents identified the absence of clear legal guidelines as a major challenge, increasing the risk of data breaches and exposing sensitive taxpayer data to cyber threats and malicious activities.

c. The overwhelming percentage of 95.7% emphasized challenges in enforcing data protection measures, leading to potential lapses in security and accountability within automated income tax systems.

d. With a substantial 64.2%, participants pointed out that the absence of specific regulations poses challenges in managing cross-border data transfers, particularly concerning international aspects of taxation and data sharing.

e. A significant 54.9% noted that the absence of clear legislation contributes to challenges in establishing proper guidelines for the retention of taxpayer data, impacting data storage and disposal.

f. 57.4%, of participants indicated that without comprehensive legislation, there may be a lack of standardized security measures for automated income tax systems, making it difficult to ensure consistent and high-level security across different platforms.
Almost half, at 48.1%, acknowledged that the absence of clear data protection laws can erode public trust in automated income tax systems, raising concerns about the security of personal and financial information.

Figure 6, coupled with the insights presented in Table 6, provides a comprehensive overview of the identified remedies proposed by participants to address the challenges associated with safeguarding taxpayer information in automated income tax systems. These challenges identify by the respondents include as follows:

a. A significant 77.3% of participants recommended developing and enacting comprehensive data protection laws to provide a legal foundation for safeguarding taxpayer information in automated income tax systems.

b. With an overwhelming 96.3%, participants stressed the importance of enforcing strict cybersecurity standards to ensure all automated income tax systems adhere to high-security measures, thereby reducing vulnerability to data breaches.

c. A substantial 87.1% suggested enhancing legal mechanisms to enforce data protection measures, including clear consequences for non-compliance, fostering accountability, and discouraging security lapses.

d. While lower, at 37.4%, participants still recognized the importance of implementing stringent accountability measures for breaches or unauthorized access, holding responsible parties liable for security lapses in automated income tax systems.

e. A notable 66.9% advocated for fostering international cooperation and agreements on data protection to address cross-border challenges, facilitating secure data transfer and collaboration in globalized taxation.

f. With 63.2%, participants emphasized the necessity of developing legislation with specific guidelines for the retention and secure disposal of taxpayer data to ensure responsible storage practices.

g. At 42.9%, participants acknowledged the importance of launching extensive public awareness programs to educate taxpayers and stakeholders about the security measures in place, building trust, and encouraging the adoption of automated income tax systems.

Concerning the above, the findings provide valuable insights into the perceptions, knowledge, expectations, challenges, and potential remedies associated
with automated income tax systems in Nigeria. The results suggest a generally positive outlook on the prospects of automation but also highlight areas for improvement, particularly in the legal and data protection domains.

**Conclusion**

Concerning the above study, it suffices to state that the introduction of automated income tax systems in Nigeria signifies a major step forward in tax administration, promising increased efficiency and transparency. This transition holds substantial benefits, such as improved operational efficiency, transparent financial transactions, and enhanced revenue collection. While it has the potential to streamline tax processes and reduce bureaucratic hurdles, it also faces significant challenges, primarily in data security and privacy. The absence of tailored legislation for safeguarding taxpayer information in automated tax systems creates a vulnerability, raising concerns about the system's integrity. Moreover, the implementation of automated income tax systems is threatened by cybersecurity risks, including hacking and data breaches, given their digital nature. Such compromises not only jeopardize individual privacy but also erode public trust in the reliability of automated tax processes. To address these challenges, urgent efforts are needed to establish comprehensive legislation specifically addressing data protection and privacy in automated tax systems. This legislation should offer a robust framework governing the collection, storage, and sharing of taxpayer information, accompanied by proactive cybersecurity measures to fortify the digital infrastructure. Collaborative initiatives involving government agencies, the private sector, and cybersecurity experts are essential to effectively counter emerging cyber risks and ensure the secure implementation of automated income tax systems in Nigeria.

**References**


