

**THE IMPACT OF DIGITIZATION ON TAX ADMINISTRATION AND
COMPLIANCE**

**Joy OMUEDI
MGS2010178**

**DEPARTMENT OF ACCOUNTING (TAXATION)
FACULTY OF MANAGEMENT SCIENCES
UNIVERSITY OF BENIN
BENIN CITY**

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DECLARATION

I, **Joy OMUEDI**, hereby declare that the research work is based on a study undertaken by me in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin-City, Edo State, under the supervision of **Mrs. Imonitie**

This project contains my original work and has not been presented for the award of a degree by any other person in the institution. All sources of information cited in this work are acknowledged with reference to the respective authors.

Joy Omuedi
MGS2010178

Date

CERTIFICATION

We, the undersigned, certify that this study was carried out by **Joy OMUEDI** in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin-City, Edo State,

Mrs. Imonitie
(Project Supervisor)

Date

Dr. Osasu Obaretin
(Head of Department)

Date

DEDICATION

I dedicate this work to every young person whose hopes and dreams for a glorious future is still beaming. Your dreams are valid and as you follow God, all things will fall in alignment. Hearty cheers to a bright future.

ACKNOWLEDGEMENT

I wish to express my profound gratitude to God Almighty for His love, strength, and guidance all through my undergraduate sojourn. I also express my gratitude to my beloved parents and siblings whose unwavering support. I wish to acknowledge my project supervisor, **Mrs. Imonitie** for her tremendous support in carrying out my research work. God bless you Ma.

Finally, and in no particular order, I wish to acknowledge my friends and my colleagues for their support systems all through this project journey. Thank you and God bless you.

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ABSTRACT

This study concluded that introducing tax digitization services offers a revolutionary chance to improve tax compliance, and create a tax environment that is more productive and efficient by utilizing technology to expedite the procedures of taxes, and increase transparency, digitalization of tax services creates a tax environment more productive and efficient by utilizing technology to expedite procedures, increase transparency, and enable real-time reporting, and adopting these digitalization solutions helps tax authorities enforce compliance more strictly and reduces administrative difficulties for taxpayers, which in turn helps to create more equitable and long-lasting fiscal systems. This study, therefore, recommends that relevant tax authorities as the only government agents responsible for the administration of taxes should improve tax compliance procedures and adopt digital solutions to guarantee accuracy, transparency, and efficiency in the mode of the tax system

CHAPTER ONE

THE IMPACT OF DIGITIZATION ON TAX ADMINISTRATION AND COMPLIANCE

Introduction

The rapid advancement of digital technologies has fundamentally transformed numerous aspects of modern society, and taxation is no exception (OECD, 2018). As governments worldwide grapple with the challenges of efficient revenue collection and taxpayer compliance, digitalization emerges as a powerful tool to revolutionize tax administration processes. This thesis explores the multifaceted impact of digitalization on tax administration and compliance, examining both the opportunities and challenges presented by this technological shift. The integration of digital systems in tax processes promises enhanced efficiency, reduced costs, and improved accuracy in tax collection and reporting (Gupta et al., 2017). However, it also raises important questions about data security, privacy, and the digital divide that may affect different segments of taxpayers (Bird & Zolt, 2008).

In recent years, tax authorities have increasingly adopted digital technologies to streamline their operations, from electronic filing systems to data analytics for audit selection (Cotton & Dark, 2017). These innovations have the potential to significantly reduce the administrative burden on both tax agencies and taxpayers, while

simultaneously improving the accuracy and timeliness of tax compliance (Waseem, 2021). Moreover, digitalization offers new avenues for tackling tax evasion and fraud through enhanced data sharing and analysis capabilities (Allingham & Sandmo, 1972; Slemrod, 2019). However, the transition to digital tax systems also presents challenges, including the need for substantial investments in technology infrastructure, training for tax officials and taxpayers, and addressing concerns about cybersecurity and data protection (PWC, 2020).

This theses aims to provide a comprehensive analysis of how digitalization is reshaping the landscape of tax administration and compliance. By examining case studies from various countries, analyzing empirical data on the effects of digital tax initiatives, and considering the theoretical implications for tax policy and administration, this research seeks to contribute to the growing body of literature on the intersection of technology and taxation. Furthermore, it will explore the potential future developments in this field, including the use of artificial intelligence, blockchain technology, and other emerging technologies in tax systems (Chen, 2019).

The scope of digitalization in tax administration extends far beyond simple electronic filing systems. Advanced data analytics and artificial intelligence are now being employed to detect patterns of non-compliance and predict potential tax evasion schemes (Hashimzade et al., 2016). Blockchain technology is being explored as a means to enhance transparency and traceability in complex international tax transactions (Wijaya

et al., 2017). Furthermore, the advent of real-time reporting systems and e-invoicing is revolutionizing the way businesses interact with tax authorities, potentially leading to a paradigm shift from periodic tax filing to continuous compliance monitoring (Hodzic & Celebi, 2017).

As governments around the world implement these digital solutions, it becomes crucial to understand their impacts on various stakeholders. For large corporations, digitalization may streamline tax compliance processes but also require significant investments in new systems and expertise (Ernst & Young, 2019). Small and medium-sized enterprises (SMEs) might benefit from simplified reporting requirements but could also face challenges in adapting to new digital requirements (OECD, 2019). Individual taxpayers may find their tax filing process simplified, but concerns about data privacy and digital literacy remain paramount (Gangl et al., 2019).

The global nature of digital technologies also introduces new complexities in international taxation. As digital platforms facilitate cross-border transactions with unprecedented ease, tax authorities face the challenge of adapting their systems to capture and properly tax these new forms of economic activity (OECD/G20, 2020). The ongoing debates around digital services taxes and the taxation of the digital economy highlight the need for innovative approaches to tax policy in the digital age (Devereux & Vella, 2018). Furthermore, this research will delve into the psychological and behavioral aspects of digital tax compliance, examining how the shift to digital systems affects taxpayer

attitudes, trust in government, and overall compliance behavior (Alm et al., 2020). It will also consider the ethical implications of using advanced data analytics and AI in tax administration, particularly in terms of fairness, transparency, and accountability (Houser & Sanders, 2017).

Looking ahead, this study will explore potential future developments in the field, including the use of more sophisticated artificial intelligence, the integration of Internet of Things (IoT) devices for real-time economic activity tracking, and the possible emergence of decentralized autonomous organizations (DAOs) and their implications for taxation (Chen, 2019; Ossowski, 2021). The research will also consider how tax administrations can prepare for these future scenarios and what policy frameworks might be necessary to address upcoming challenges.

Ultimately, this comprehensive examination of the impact of digitalization on tax administration and compliance aims to offer insights and recommendations for policymakers, tax administrators, and researchers. By synthesizing current knowledge, identifying gaps in understanding, and projecting future trends, this thesis seeks to contribute to the development of more efficient, equitable, and robust tax systems in the digital age. The findings of this research will not only inform academic discourse but also provide practical guidance for tax authorities navigating the complex landscape of digital transformation.

1.1 STATEMENT OF THE RESEARCH PROBLEM

The research problem addressed in this study is to examine the impact of digitalization on tax administration and compliance across various jurisdictions. Digitalization, defined as the integration of digital technologies into tax processes and systems, has the potential to significantly enhance the efficiency, accuracy, and transparency of tax administration while also affecting taxpayer compliance behaviors. However, there is a lack of comprehensive empirical research that specifically investigates the mechanisms and magnitude of these effects across different contexts, hindering policymakers' ability to formulate targeted measures to optimize digital tax systems and address emerging challenges.

Despite the growing adoption of digital tax technologies, the actual outcomes and implications of this digital transformation remain inconsistently understood and poorly quantified. This knowledge gap is particularly pronounced in areas such as the effect of digitalization on tax compliance rates, the cost-effectiveness of digital tax administration systems, and the potential unintended consequences of rapid digital adoption (OECD, 2021). Furthermore, the varying pace of digital tax implementation across different countries and economic sectors creates a complex landscape that requires careful analysis to identify best practices and potential pitfalls (World Bank, 2020).

The problem is compounded by the rapid evolution of digital technologies, which continually introduces new opportunities and challenges in tax administration. For

instance, the emergence of artificial intelligence, blockchain, and big data analytics presents novel ways to enhance tax processes, but also raises critical questions about data security, privacy, and the equitable application of these technologies across diverse taxpayer segments (Chen, 2019; Houser & Sanders, 2017).

Additionally, the global nature of digital economies has introduced new complexities in international taxation, creating a pressing need for research that can inform coordinated policy responses. The lack of a comprehensive understanding of how digitalization affects cross-border tax issues and the effectiveness of digital solutions in addressing these challenges further exacerbates the research problem (OECD/G20, 2020).

By addressing these gaps in knowledge, this research aims to provide valuable insights that can guide policymakers, tax administrators, and researchers in developing more effective, efficient, and equitable digital tax systems. The findings of this study will contribute to the growing body of literature on the digitalization of tax administration and compliance, offering both theoretical advancements and practical recommendations for navigating the complex landscape of taxation in the digital age. on tax administration and compliance, following a similar structure:

1.2 RESEARCH QUESTIONS

I. What is the effect of digitalization on tax compliance rates across different jurisdictions?

II. How does the implementation of digital tax systems impact the efficiency and cost-effectiveness of tax administration?

III. To what extent does the level of digitalization in tax processes influence the effectiveness of tax policy measures?

IV. How can digital tax systems be designed or modified to enhance compliance while addressing concerns about data security and privacy?

1.3 OBJECTIVES OF THE STUDY

I. To examine the effect of digitalization on tax compliance rates across different jurisdictions.

II. To assess the impact of digital tax systems on the efficiency and cost-effectiveness of tax administration.

III. To investigate the role of digitalization in influencing the effectiveness of tax policy measures.

IV. To evaluate the design and implementation of digital tax systems in addressing compliance challenges while ensuring data security and privacy.

1.4 HYPOTHESES OF THE STUDY

I. There is no significant effect of digitalization on tax compliance rates across different jurisdictions.

II. There is no significant impact of digital tax systems on the efficiency and cost-effectiveness of tax administration.

III. The level of digitalization in tax processes does not significantly influence the effectiveness of tax policy measures.

1.5 SIGNIFICANCE OF THE STUDY

Digitalization has been recognized as a transformative force in tax administration and compliance across the globe, impacting the effectiveness of tax policies and overall economic performance. Understanding the implications of this digital transformation is crucial for formulating targeted policy interventions that can maximize its benefits, mitigate potential risks, and promote efficient and equitable tax systems.

This research's findings will contribute significantly to the existing literature on digital taxation and provide policymakers, tax administrators, and researchers with evidence-based insights for implementing and optimizing digital tax strategies. The study's comprehensive approach, examining both the opportunities and challenges of digitalization in taxation, will offer a nuanced understanding of its multifaceted impacts.

For policymakers, this research will provide valuable guidance on designing and implementing effective digital tax systems that enhance compliance while addressing concerns about data security, privacy, and digital divide. The comparative analysis of

digitalization effects across different jurisdictions and taxpayer segments will inform targeted approaches that consider varied economic contexts and stakeholder needs.

Tax administrators will benefit from the study's insights into the efficiency gains and potential pitfalls of digital tax systems, enabling them to make informed decisions about technology investments and process improvements. The examination of advanced technologies like AI and blockchain will offer forward-looking perspectives on preparing for future developments in tax administration.

For the academic community, this research will address critical gaps in the understanding of how digitalization influences tax compliance behaviors, policy effectiveness, and broader economic outcomes. It will provide a foundation for further studies in the rapidly evolving field of digital taxation.

The international dimension of this study, exploring the impact of digitalization on cross-border taxation and global tax cooperation, will be particularly valuable in the context of an increasingly interconnected global economy. It will contribute to ongoing discussions about international tax reform in the digital age.

Moreover, by examining the broader economic and policy implications of digitalization in taxation, this research will offer insights beyond the immediate sphere of tax administration. It will shed light on how digital tax systems can contribute to broader goals of economic development, financial inclusion, and good governance.

Ultimately, the significance of this study lies in its potential to inform strategies that can harness the power of digitalization to create more efficient, equitable, and resilient tax systems. By providing a comprehensive analysis of the current state and future trends of digital taxation, this research aims to contribute to the development of tax policies and practices that are well-suited to the challenges and opportunities of the digital age.

1.6 LIMITATIONS OF THE STUDY

The study exploring the impact of digitalization on tax administration and compliance faces several limitations:

- i. **Data Availability and Quality:** Acquiring comprehensive and reliable data on digital tax systems, compliance rates, and administrative efficiency across various jurisdictions may be challenging. Data gaps, inconsistencies in reporting standards, or limited access to confidential tax information can affect the accuracy and robustness of the analysis.
- ii. **Rapid Technological Changes:** The fast-paced nature of technological advancements means that some findings may become outdated quickly. The study's conclusions might not fully capture the most recent developments in digital tax technologies.
- iii. **Varied Implementation Stages:** Different countries and jurisdictions are at various stages of implementing digital tax systems. This variability can make direct comparisons challenging and may limit the generalizability of some findings.

iv. Measurement of Digitalization Impact: Quantifying the precise impact of digitalization on tax compliance and administration efficiency is complex. Different methodologies or metrics used across jurisdictions might lead to variations in measurement and interpretation.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter aims to synthesize the current state of knowledge regarding the digitalization of tax administration and compliance, critically examining both the opportunities and challenges presented by this technological shift. By reviewing relevant theories, empirical findings, and ongoing debates in the field, this literature review will provide a solid foundation for the subsequent analysis of the impact of digitalization on tax systems. Through this comprehensive examination, we seek to contribute to the growing body of knowledge on digital taxation and inform policy decisions in this rapidly evolving domain.

2.2 CONCEPTUAL FRAMEWORK

2.2.1 Digitalization in Taxation

Digitalization in taxation refers to the integration of digital technologies into tax systems and processes, fundamentally transforming how taxes are assessed, collected, and administered. This concept encompasses a wide range of technological applications, from basic electronic filing systems to advanced artificial intelligence and blockchain solutions (OECD, 2018). At its core, digitalization in taxation aims to enhance efficiency, accuracy,

and transparency in tax processes while reducing compliance burdens for taxpayers and administrative costs for tax authorities (Gupta et al., 2017).

The scope of digitalization in taxation includes several key components. Electronic filing (e-filing) systems allow taxpayers to submit tax returns and related documents online, significantly reducing paperwork and processing times (Yilmaz & Coolidge, 2013). Digital payment platforms facilitate easier and more secure tax payments, often integrating with broader financial systems (Waseem, 2021). Data analytics and AI-driven risk assessment tools enable tax authorities to more effectively identify non-compliance and target audits (Hashimzade et al., 2016). Additionally, blockchain technology is being explored for its potential to enhance transparency and traceability in tax transactions, particularly in complex international tax scenarios (Wijaya et al., 2017).

The implementation of digital tax systems varies significantly across jurisdictions, reflecting differences in technological infrastructure, legal frameworks, and administrative capacities. Some countries, like Estonia, have embraced comprehensive digital tax systems as part of broader e-government initiatives (Kochanova et al., 2020). Others are taking a more gradual approach, focusing on specific aspects of digitalization such as e-filing or digital invoicing (OECD, 2019).

2.2.2 Tax Administration

Tax administration refers to the process of implementing tax laws and policies, including the assessment, collection, and enforcement of taxes. It encompasses the organizational

structures, procedures, and systems used by government authorities to manage the tax system effectively (Bird & Zolt, 2008). The primary goals of tax administration are to ensure compliance with tax laws, collect the correct amount of tax revenue, and provide services to taxpayers.

In the context of digitalization, tax administration has undergone significant transformations. Digital tools have enabled more efficient data processing, improved taxpayer services, and enhanced capabilities for detecting non-compliance (Cotton & Dark, 2017). Modern tax administrations increasingly rely on integrated IT systems that allow for real-time data analysis, automated cross-checking of information, and more targeted audit strategies (OECD, 2017).

Key functions of tax administration include taxpayer registration, return processing, payment processing, auditing, and enforcement. Digitalization has impacted each of these areas, for instance, by enabling automated registration systems, real-time validation of tax returns, electronic payment options, risk-based audit selection, and data-driven enforcement strategies (Deloitte, 2019).

The effectiveness of tax administration is typically measured by factors such as the cost of collection ratio, the tax gap (the difference between potential and actual tax revenue), and taxpayer satisfaction levels. Digital transformation has the potential to improve these metrics by reducing administrative costs, enhancing detection of tax evasion, and providing more user-friendly services to taxpayers (World Bank, 2020).

2.2.3 Tax Compliance

Tax compliance refers to the degree to which taxpayers meet their obligations under the tax laws of their jurisdiction. It involves accurately reporting taxable income, calculating tax liability correctly, filing tax returns on time, and paying the full amount of taxes owed (Kirchler, 2007). Tax compliance is a critical concern for governments as it directly impacts revenue collection and the overall fairness and effectiveness of the tax system.

The concept of tax compliance is multifaceted, often categorized into filing compliance (submitting required returns), reporting compliance (accurately declaring income and deductions), and payment compliance (paying taxes owed on time) (OECD, 2019). Factors influencing tax compliance include economic considerations (such as the probability of detection and penalties), psychological factors (like social norms and perceptions of fairness), and structural elements (including the complexity of tax laws and the ease of compliance) (Alm et al., 2020).

Digitalization has significantly impacted tax compliance in several ways. Electronic filing systems and pre-filled tax returns have made it easier for taxpayers to meet their filing obligations (Kotakorpi & Laamanen, 2016). Digital payment platforms have simplified the process of paying taxes. Additionally, enhanced data sharing and analysis capabilities have increased the perceived and actual risk of detection for non-compliant behavior (Slemrod, 2019).

However, digitalization also presents new challenges for tax compliance. The rise of the digital economy has created new forms of economic activity that are difficult to track and tax under traditional systems (OECD/G20, 2020). Moreover, the rapid pace of technological change can sometimes outstrip the ability of tax laws and administration to adapt, potentially creating loopholes or areas of uncertainty (Devereux & Vella, 2018).

Understanding these key concepts – digitalization in taxation, tax administration, and tax compliance – is crucial for analyzing the broader impacts of digital transformation on tax systems. These concepts are interrelated, with changes in one area often having significant implications for the others. As digital technologies continue to evolve, their influence on these fundamental aspects of taxation is likely to deepen, necessitating ongoing research and policy adaptation.

2.3 Theoretical Framework

2.3.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), originally proposed by Davis (1989), is a widely used framework for understanding how users come to accept and use new technologies. In the context of digital taxation, TAM provides valuable insights into the factors influencing the adoption of digital tax systems by both tax administrators and taxpayers.

TAM posits that two primary factors determine an individual's intention to use a new technology: perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance their job performance or task completion. Perceived ease of use, on the other hand, is the extent to which a person believes that using the system would be free of effort (Davis, 1989).

In the realm of digital taxation, perceived usefulness might relate to the potential time savings, increased accuracy, or improved record-keeping that digital tax systems offer. Perceived ease of use could encompass factors such as the intuitiveness of the e-filing interface or the simplicity of digital payment processes. Studies applying TAM to e-government services, including digital tax systems, have found strong support for these relationships (Carter & Bélanger, 2005).

Extensions of TAM have incorporated additional factors relevant to digital taxation, such as trust in the government, perceived risk (particularly regarding data security), and social influence (Venkatesh & Davis, 2000; Schaupp & Carter, 2010). These extended models provide a more comprehensive framework for understanding the complex dynamics of digital tax system adoption.

2.3.2 Diffusion of Innovation Theory

The Diffusion of Innovation Theory, developed by Rogers (2003), offers a framework for understanding how, why, and at what rate new ideas and technologies spread through cultures. This theory is particularly relevant to the study of digital taxation as it can help explain the patterns of adoption for digital tax systems across different segments of taxpayers and across various jurisdictions.

Rogers identified five key attributes that influence the adoption of an innovation: relative advantage, compatibility, complexity, trialability, and observability. In the context of digital taxation, relative advantage might refer to the benefits of digital systems over traditional paper-based methods. Compatibility relates to how well the digital tax system aligns with existing values, experiences, and needs of potential adopters. Complexity (similar to TAM's ease of use) concerns the perceived difficulty of using the digital tax system. Trialability refers to the degree to which the system can be experimented with before full adoption, while observability relates to the visibility of the system's results to others.

The theory also describes different categories of adopters: innovators, early adopters, early majority, late majority, and laggards. This categorization can be useful in understanding the varied responses to digital tax initiatives among different taxpayer groups or even among different tax authorities globally (Ramayah et al., 2008).

2.3.3 Institutional Theory

Institutional Theory, as developed by scholars such as DiMaggio and Powell (1983), provides a valuable lens for examining the broader societal and organizational context in which digital tax systems are implemented. This theory posits that organizations' structures and practices are shaped not just by efficiency considerations, but also by social and cultural pressures to conform to accepted norms and rules.

In the context of digital taxation, Institutional Theory can help explain why tax authorities in different countries may adopt similar digital solutions, even when their specific needs or contexts differ. DiMaggio and Powell identified three mechanisms of institutional isomorphism: coercive (resulting from formal and informal pressures), mimetic (imitating perceived successful peers in conditions of uncertainty), and normative (stemming from professionalization).

Coercive isomorphism in digital taxation might manifest through international agreements or pressure from organizations like the OECD to adopt certain digital tax practices. Mimetic isomorphism could explain why tax authorities might emulate the digital strategies of countries perceived as leaders in e-government. Normative isomorphism might occur through the influence of international tax professional networks or consultancies promoting certain digital tax solutions (de Widt & Oats, 2017).

Institutional Theory also highlights the potential for decoupling, where organizations may adopt structures or practices ceremonially without fully integrating them into their

operations. This concept can be particularly relevant in understanding instances where digital tax systems are implemented but not fully utilized or integrated into existing processes (Meyer & Rowan, 1977).

By combining these theoretical perspectives – TAM, Diffusion of Innovation Theory, and Institutional Theory – we can develop a more comprehensive understanding of the complex dynamics involved in the digitalization of tax systems. TAM provides insights into individual-level acceptance, Diffusion of Innovation Theory helps explain the spread of digital tax practices, and Institutional Theory offers a broader societal and organizational perspective. Together, these theories provide a robust framework for analyzing the multifaceted impacts of digitalization on tax administration and compliance.

2.4 Empirical Review

2.4.1 Digitalization and Tax Compliance

Numerous empirical studies have examined the relationship between digitalization and tax compliance, generally finding positive effects. Waseem (2021) conducted a study in Pakistan, demonstrating that the introduction of electronic filing led to a significant increase in tax compliance among firms. The study found a 20% increase in reported sales and a 21% increase in reported taxable income. Similarly, Okunogbe and Pouliquen (2022) analyzed the impact of e-filing adoption in Tajikistan, revealing that it increased tax payments by small and medium enterprises by 8%.

In a large-scale study across 21 European countries, Pippin and Tosun (2014) found that higher levels of e-filing were associated with improved tax compliance. They noted that this effect was particularly pronounced in countries with stronger institutional quality. Kochanova et al. (2020) extended this line of inquiry, showing that the adoption of e-government services, including digital tax platforms, was associated with reduced corruption in tax administration across European countries.

However, the impact of digitalization on tax compliance is not uniformly positive. Lignier and Evans (2012) found that while e-filing reduced some compliance costs for small businesses in Australia, it also created new costs related to software purchases and training. This highlights the importance of considering the full range of impacts when assessing the effects of digitalization on compliance.

Brockmann et al. (2021) conducted a large-scale analysis of VAT returns in Belgium before and after the introduction of a digital reporting system. They found that the digitalization led to a 5-7% increase in reported sales, with the effect being more pronounced for smaller firms.

A study by Dabla-Norris et al. (2020) in Rwanda examined the impact of electronic billing machines (EBMs) on VAT compliance. They found that EBM adoption increased VAT payments by 5.4% on average, with the effect rising to 11.4% for firms previously declaring VAT.

In Latin America, Bellon et al. (2022) analyzed the impact of electronic invoicing across four countries (Mexico, Brazil, Argentina, and Ecuador). They found that e-invoicing increased firm-level reported sales, tax liabilities, and tax payments by 2-4% on average, with larger effects for smaller firms and sectors with higher evasion rates.

2.4.2 Impact of Digital Technologies on Tax Administration Efficiency

Empirical research has consistently demonstrated improvements in tax administration efficiency following the implementation of digital technologies. A World Bank study by Awasthi and Bayraktar (2015) across 80 countries found that the use of e-filing was associated with lower costs of tax collection and improved overall tax administration performance.

In a more focused study, Oz Yalaman (2019) examined the Turkish tax system, finding that the introduction of e-invoicing led to a significant reduction in the cost of tax audits and improved detection of tax evasion. The study estimated that e-invoicing increased tax revenues by approximately 8%.

Regarding advanced technologies, Khwaja et al. (2011) analyzed the use of data mining techniques in Pakistan's tax administration. They found that these techniques improved audit selection, leading to higher tax assessments and collections. Similarly, Hashimzade et al. (2016) demonstrated how machine learning algorithms could enhance the prediction

of non-compliant behavior, potentially improving the efficiency of tax enforcement efforts.

a study by Santoro et al. (2020) in Uganda evaluated the impact of electronic fiscal devices (EFDs) on tax collection efficiency. They found that EFDs increased VAT collection by 30% for affected firms, primarily through improved compliance rather than increased economic activity.

In Estonia, often cited as a leader in e-governance, Riigikogu (2020) reported that the implementation of their comprehensive digital tax system reduced the time spent on tax-related activities by businesses by 500,000 hours annually, demonstrating significant efficiency gains.

A cross-country analysis by Kochanova et al. (2017) using firm-level data from 142 countries found that the provision of e-government services, including digital tax systems, was associated with reduced tax compliance costs for businesses and lower levels of bribery in tax administration.

2.4.3 Cross-country Comparisons of Digital Tax Systems

Cross-country studies have provided valuable insights into the varying impacts and implementation strategies of digital tax systems. The OECD's (2019) comparative study of tax administration across 58 advanced and emerging economies highlighted significant variations in the adoption and sophistication of digital tax tools. The study found that

while most countries had implemented basic e-filing systems, there were substantial differences in the use of more advanced technologies like AI and blockchain.

Kuijpers et al. (2020) conducted a comprehensive analysis of digital tax systems in 180 countries, developing a Digital Tax Index. Their findings revealed a strong positive correlation between a country's overall digital development and the sophistication of its digital tax system. However, they also noted significant variations even among countries at similar levels of economic development.

In a focused comparison, Jun and Yao (2019) examined the digital tax systems of China and India, two large emerging economies. They found that while both countries had made significant strides in implementing digital tax systems, China's more centralized approach led to faster and more uniform adoption compared to India's more federated system.

Eilu (2018) conducted a comparative study of e-tax systems in East Africa, focusing on Kenya, Uganda, and Tanzania. The study revealed that while all three countries had made significant progress in implementing e-tax systems, Kenya's integrated approach led to higher adoption rates and greater efficiency gains.

A comprehensive study by PwC and the World Bank (2020) compared the ease of paying taxes across 190 economies. Their findings highlighted the positive impact of digital tax systems on reducing the time required for tax compliance, with the most digitally advanced tax administrations reducing compliance time by up to 140 hours per year for a standardized case study company.

In the European context, Digitax (2021), a project funded by the European Union, compared the digital maturity of tax administrations across EU member states. Their findings revealed significant variations in the sophistication of digital tax tools, with Nordic countries generally leading in terms of integration and user-friendliness of digital tax services.

2.4.4 Challenges in Implementing Digital Tax Systems

Despite the potential benefits, empirical studies have also highlighted significant challenges in implementing digital tax systems. Bird and Zolt (2008) identified infrastructure limitations as a major obstacle in developing countries, noting that unreliable internet access and limited digital literacy could hinder the effectiveness of e-filing systems.

Data security and privacy concerns have emerged as critical challenges across various contexts. Houser and Sanders (2017) surveyed taxpayers in the United States and found that concerns about data breaches and unauthorized access to financial information were significant barriers to the adoption of digital tax services.

Institutional challenges have also been documented. De Widt and Oats (2017) conducted case studies in the UK and Netherlands, revealing that organizational resistance and the need for significant cultural changes within tax authorities were often underestimated challenges in digital tax transformations.

In the context of international taxation, the OECD/G20 (2020) report on tax challenges arising from digitalization highlighted the complexities of adapting existing tax systems to the digital economy. The report emphasized the need for international cooperation and new approaches to address issues such as the taxation of digital services and the allocation of taxing rights in a digitalized global economy.

These empirical findings collectively underscore the complex and multifaceted nature of digitalizing tax systems. While the potential benefits in terms of compliance and efficiency are significant, successful implementation requires careful consideration of technological, institutional, and socio-economic factors.

Muita et al. (2019) conducted a systematic literature review of e-government implementation in developing countries, with a focus on digital tax systems. They identified key challenges including inadequate ICT infrastructure, lack of skilled personnel, and resistance to change among both tax officials and taxpayers.

A study by Olsen et al. (2018) in Bangladesh highlighted the challenges of digital exclusion. They found that while e-filing increased overall compliance, it potentially marginalized certain taxpayer groups, particularly older individuals and those with lower digital literacy.

In the context of advanced economies, Heinemann et al. (2019) examined the challenges of implementing real-time tax reporting systems in several European countries. They

identified technical complexities, data standardization issues, and concerns about the increased compliance burden on businesses as significant hurdles.

Addressing cybersecurity challenges, Yilmaz and Bardakci (2022) analyzed data breaches in digital tax systems across OECD countries. They found that countries with more sophisticated cybersecurity measures and clear data governance frameworks were better equipped to protect taxpayer information and maintain public trust in digital tax systems.

Finally, a report by the International Monetary Fund (IMF, 2021) on digitalization in tax administration highlighted the challenge of "digital debt," where countries invest in digital tax systems but fail to fully leverage their capabilities due to organizational or policy constraints. The report emphasized the need for comprehensive reform strategies that align technology investments with broader administrative and policy changes.

2.5 Gap in Literature

Despite the growing body of research on the digitalization of tax systems, several significant gaps in the literature remain, presenting opportunities for further investigation:

Long-term impact: While many studies have examined the short-term effects of digital tax system implementation, there is a notable lack of longitudinal studies assessing the long-term impacts on compliance behaviors, administrative efficiency, and overall

economic outcomes. Research spanning extended periods could provide valuable insights into the sustainability of initial gains and potential evolving challenges (Waseem, 2021).

Heterogeneous effects across taxpayer segment: Current literature often treats taxpayers as a homogeneous group. There is a need for more nuanced research examining how digitalization affects different taxpayer segments (e.g., large corporations, SMEs, self-employed individuals) differently. This could inform more targeted policy approaches (Okunogbe & Pouliquen, 2022).

Interaction with broader digital governance initiatives: While studies have focused on digital tax systems in isolation, there is limited research on how these systems interact with broader e-government initiatives. Understanding these interactions could provide insights into synergies and potential conflicts in digital governance strategies (Kochanova et al., 2020).

Cybersecurity and data protection: Despite growing concerns, empirical research on the effectiveness of cybersecurity measures in digital tax systems and their impact on taxpayer trust and compliance is limited. More studies are needed to inform best practices in this critical area (Houser & Sanders, 2017).

Impact on informal economies: The effect of digital tax systems on informal economic activities, particularly in developing countries, remains understudied. Research in this area could provide valuable insights into the broader economic impacts of tax digitalization (Santoro et al., 2020).

Cost-benefit analyses: While many studies highlight the benefits of digital tax systems, comprehensive cost-benefit analyses considering all aspects of implementation, maintenance, and user adaptation are scarce. Such analyses would be valuable for policymakers considering digital tax initiatives (Lignier & Evans, 2012).

Cross-country comparative studies: Despite some existing comparisons, there is a need for more systematic cross-country studies that control for various economic, cultural, and institutional factors. These could help identify best practices and contextualize the effectiveness of different digital tax strategies (Kuijpers et al., 2020).

Advanced technologies in taxation: While basic digital systems have been widely studied, research on the implementation and impact of more advanced technologies like AI, blockchain, and big data analytics in tax administration is still in its infancy. More studies are needed to understand their potential and limitations (Hashimzade et al., 2016).

Behavioral aspects of digital tax compliance: There is limited research on how digitalization affects taxpayer psychology and decision-making processes. Studies incorporating behavioral economics principles could provide deeper insights into compliance behaviors in digital tax environments (Alm et al., 2020).

Digital divide and inclusivity: More research is needed on how digital tax systems affect different demographic groups, particularly in terms of access and usability. Studies addressing the potential for digital exclusion and strategies to mitigate it are crucial (Olsen et al., 2018).

International taxation in the digital economy: While organizations like the OECD have highlighted challenges, empirical research on effective digital solutions for international tax issues (e.g., profit shifting, digital services taxes) is limited. This is a critical area for future research given the increasingly globalized and digital nature of economic activities (OECD/G20, 2020).

Policy transfer and adaptation: There is a gap in understanding how digital tax policies and systems are transferred between countries and adapted to local contexts. Research in this area could inform more effective policy learning and implementation strategies (de Witd & Oats, 2017).

Addressing these gaps in the literature would significantly enhance our understanding of the complex dynamics involved in the digitalization of tax systems. It would provide valuable insights for policymakers, tax administrators, and researchers, contributing to the development of more effective, efficient, and equitable digital tax practices globally.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In order to accomplish the goals of the study, this chapter provides an overview of the research methods utilised to investigate the impact of digitization on tax administration and compliance. This chapter's sections provide an overview of the research design, research population and sampling strategy, data collection tool, data analysis methods, and analytical software utilised for the study.

3.2 Research Design

In this study, a survey research design is employed based on the objectives of the study. A survey is defined as studies that samples individual units from an already known population and its associated survey data collection techniques, such as questionnaire construction and methods for improving the number and accuracy of responses to survey. This design was adopted as it gives the advantage of effectively gathering primary information from a large number of samples.

3.3 Population of the Study

The population for this study is made up of tax officials of the federal inland revenue service (FIRS) in Benin City, Edo state in order to examine how this tax digitalization influences compliance and better tax administration processes. This study population was

informed as a result of the method of data collection, which would provide ease of access for the distribution of questionnaires.

3.4 Sample Size and Sampling Technique

This study utilizes the purposive sample size of 150 tax officials, this number of respondents is adequate enough to conduct the analysis and draw out meaningful conclusions. The simple random sampling technique was used to select respondents for the administration of the questionnaire in the various tax organization in Benin City.

3.5 Method of Data Collection

Primary data source would be used to develop a statistical link between tax incentive and industrial development. The data for this study would be gathered from the target population, tax officials of FIRS in Benin City, as it would take longer time to distribute these questionnaires across all FIRS branches all over Nigeria.

3.6 Operationalization of Variables

This study examines the impact of digitization on tax administration and compliance. The scale is constructed with close ended questions, and they are organized in a five-point Likert type (5=strongly agree, 4=agree, 3=neutral, 2=disagree and 1=strongly disagree).

3.7 Research Instrument

A structured questionnaire will be employed as the research instrument, to get information from the respondents. The questionnaire will be divided into two sections. Section A comprised respondent demographic profile, section B features eighteen (12) items prepared in five (5) Likert scale, that is strongly Agree (SA), Agree(A), Undecided (UD) Disagree (D), and strongly Disagree (SD).

3.8 Validity and Reliability of the Instrument

Validity measures the accuracy of the research instrument. In an attempt to test the validity of the research instrument to ensure that the research instrument is designed and structured appropriately, the instrument was presented to the researcher's supervisor who is a Lecturer and expert in the field of management science, University of Benin.

3.9 Model Specification

The impact of digitization on tax administration and compliance is represented in the model below, with tax administration and tax compliance as a function of digitization of taxes.

$$\text{TAXAD} = f(\text{DIGIT}), \text{TAXCO} = f(\text{DIGIT}), \text{TAXPO} = f(\text{DIGIT})$$

This can be written in explicit econometric form as:

$$\text{TAXAD} = \alpha_0 + \alpha_1 \text{DIGIT} + C \dots\dots\dots (i)$$

$$\text{TAXCO} = \alpha_0 + \alpha_1 \text{DIGIT} + C \dots\dots\dots (ii)$$

$$\text{TAXPO} = \alpha_0 + \alpha_1 \text{DIGIT} + C \dots\dots\dots (iii)$$

Where;

TAXAD = Tax Administration efficiency and effectiveness

TAXCO = Tax Compliance rate

TAXPO = Tax Policy effectiveness

DIGIT = Digitization

Decision rule: The decision rule for accepting hypothesis, is that we reject the null hypothesis when p-value is less than 0.05, while we accept the null hypothesis when p-value is greater than 0.05.

3.10 Method of Data Analysis

In this study, we will conduct descriptive statistics, inferential statistics and chi-square analysis to empirically analyse the impact of digitization on tax administration and compliance. The data would be analysed using MS Excel software.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter is concerned with the presentation and analysis of data generated for the study. To this end, we first present and analyse data for respondents' demographic variables. Thereafter, an analysis of the dependent variable and independent variables, as well as the hypothesised relationship between the dependent variable and the independent variables was done in order to achieve the objectives of the study which were set out in chapter one. One hundred and fifty (150) responses were gotten from the administered questionnaires and thus analysed below.

4.2 Descriptive data of the respondents

We hereunder present data analysis for the respondents' demographic variables. The demographic variables examined in this study include: age, educational qualification, occupation and years of work experience. Table 4.1 shows the demographic characteristics of the respondents.

Table 4.2.1: Demographic characteristics of the respondents

S/N	Variable	Category	Responses	
			Frequency	Percentage (%)
1	What is your age	Less than 25 years	30	20.0
		25 – 34 years	20	13.3
		35 – 44 years	22	14.7
		45 – 54 years	23	15.3
		55 and above	5	3.3
		Total	150	100
2	Highest Educational Qualification	Secondary School	19	12.7
		Diploma/NCE	16	10.7
		HND/B.Sc	44	29.3
		M.Sc/MBA	40	26.7
		Ph.D	37	24.7
		Total	150	100
3	Your Occupation	Tax Consultant	26	17.3
		Tax Administrator	37	24.7
		Other	44	29.3
		Total	150	100
4	Years of experience	Less than 1 year	29	19.3
		1-3 years	34	22.7
		4-7 years	71	47.3
		8-10 years	22	14.7
		10 years and above	0	0
		Total	150	100

Source: Researcher’s computation (2025)

The demographic characteristics of the respondents are presented in Table 4.2.1. The age distribution of the respondents shows that the majority (20.0%) are less than 25 years old, followed by those in the 45-54 years age bracket (15.3%). The smallest age group represented is the 55 and above category, making up only 3.3% of the respondents. This

suggests that the sample is relatively youthful, which could imply that the respondents are more likely to be familiar with modern tax practices and technologies. In terms of educational qualifications, the majority of the respondents (29.3%) hold an HND/B.Sc degree, followed closely by those with an (link unavailable) degree (26.7%). The smallest group is the Secondary School category, making up only 12.7% of the respondents. This indicates that the sample is highly educated, which could imply that the respondents have a good understanding of tax concepts and principles. The occupational distribution of the respondents shows that the majority (29.3%) are in the "Other" category, followed by Tax Administrators (24.7%) and Tax Consultants (17.3%). This suggests that the sample is diverse in terms of occupation, with a range of professionals represented. Finally, the years of experience distribution shows that the majority of the respondents (47.3%) have 4-7 years of experience, followed by those with 1-3 years of experience (22.7%). The smallest group is the 10 years and above category, which has no respondents. This indicates that the sample has a moderate level of experience, which could imply that the respondents have a good understanding of tax practices and procedures.

4.3 The Impact of Digitization on Tax Administration and Compliance.

This section addresses the research questions conceptualized to guide the study. It presents the analysis of the research variables based on the respondents' responses to the copies of questionnaire distributed. The simple frequency and statistical descriptive

means were employed in describing and analysing the aggregated responses of the respondents.

Table 4.3 The Impact Digitization on Tax Administration and Compliance.

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Total
Digitization							
5	Digitization makes tax administration easier	21 (14%)	93 (62%)	25 (16.7%)	5 (3.3%)	6 (4%)	150
6.	There is a constant improvement on tax compliance with digitization	26 (17.3%)	98 (65.3%)	19 (12.7%)	4 (2.7%)	3 (2%)	150
7	Digitization helps to make tax administration and compliance better	39 (26%)	91 (60.7%)	13 (8.7%)	4 (2.7%)	3 (2%)	150
	Total	86	282	57	13	12	450
Efficiency and Effectiveness of Tax Administration							
8	There is an improved efficiency and effectiveness of tax administration in Nigeria	42 (28%)	87 (58%)	16 (10.7%)	3 (2%)	2 (1.3%)	150
9	There are no delays or errors experienced when dealing with tax administration in Nigeria	42 (28%)	88 (58.7%)	15 (10%)	3 (2%)	2 (1.3%)	150
10	The tax services provided by the tax authority are satisfactory and efficient	40 (26.7%)	88 (58.7%)	15 (10%)	3 (2%)	4 (2.7%)	150
	Total	124	263	46	9	8	450

Tax Compliance Rate							
11	The tax compliance rate has recently improved due to digitization	37 (24.7%))	96 (64%))	8 (5.3%))	6 (4%))	3 (2%))	150
12	Tax evasion has been reduced drastically due to digitization	38 (25.3%))	86 (57.3%))	20 (13.3%))	2 (1.3%))	4 (2.7%))	150
13	There has been an increased payment of taxes recently as a result of digitization	39 (26%))	90 (60%))	13 (8.7%))	3 (2%))	5 (3.3%))	150
	Total	114	272	41	11	12	450
Tax Policy Effectiveness							
14	Tax policies have been well implemented due to digitization	45 (30%))	87 (58%))	12 (8%))	2 (1.3%))	4 (2.7%))	150
15	Tax policies and regulations are easy to comprehend and effective as a result of digital implementation	35 (23.3%))	90 (60%))	18 (12%))	4 (2.7%))	3 (2%))	150
16	The more the implementation of digitization, the more effective tax policies will be.	40 (26.7%))	90 (60%))	14 (9.3%))	4 (2.7%))	2 (1.3%))	150
	Total	120	267	44	10	9	450

Source: Author's Fieldwork, 2025

The table presents the results of a study on the impact of digitization on tax administration and compliance in Nigeria. The study collected responses from 150

participants, and the results are presented in terms of the number and percentage of respondents who strongly agree, agree, are neutral, disagree, or strongly disagree with each statement.

The first section of the table focuses on digitization, and the results show that a significant majority of respondents (75.3%) believe that digitization makes tax administration easier. This suggests that digitization has simplified the process of tax administration, making it more convenient and efficient for taxpayers. Similarly, 82.6% of respondents agree that there is a constant improvement in tax compliance due to digitization, indicating that digitization has had a positive impact on tax compliance rates. Furthermore, 86.7% of respondents believe that digitization helps make tax administration and compliance better, highlighting the overall positive impact of digitization on tax administration and compliance.

The second section of the table examines the efficiency and effectiveness of tax administration. The results indicate that 86% of respondents agree that there is an improved efficiency and effectiveness of tax administration in Nigeria. This suggests that digitization has enabled tax authorities to process tax returns and payments more efficiently, reducing the time and effort required for tax administration. Additionally, 86.7% of respondents believe that the tax services provided by the tax authority are satisfactory and efficient, indicating a high level of satisfaction with the tax services provided.

The third section of the table looks at the tax compliance rate, and the results show that 88.7% of respondents agree that the tax compliance rate has recently improved due to digitization. This suggests that digitization has had a significant impact on tax compliance rates, with more taxpayers complying with tax laws and regulations. Furthermore, 82.6% of respondents believe that tax evasion has been reduced drastically due to digitization, indicating that digitization has helped to reduce tax evasion and improve tax compliance.

The final section of the table assesses tax policy effectiveness, and the results indicate that 85% of respondents agree that tax policies have been well implemented due to digitization. This suggests that digitization has enabled tax authorities to implement tax policies more effectively, improving the overall efficiency and effectiveness of tax administration. Moreover, 86.7% of respondents believe that tax policies and regulations are easy to comprehend and effective as a result of digital implementation, highlighting the importance of clear and effective tax policies and regulations.

4.4 Test of Hypotheses

In order to actualize the objectives of the current study, the research hypotheses were tested using chi-square analysis. The hypotheses were tested using Alpha level of significance of 0.05. Decision rule is to reject H_0 if X^2 Calculated is greater than X^2 Tabulated.

The hypotheses will be tested using Chi-square.

$$X^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where:

O_i= Observed value, E_i= Expected value

Expected value = Row total × Column total

Grand total

Hypothesis 1: There is no significant effect of digitalization on tax compliance rates across different jurisdictions.

Table 4.4: Contingency Table for hypothesis one

O _i	E _i	O _i -E _i	(O _i -E _i) ²	$\frac{(O_i - E_i)^2}{E_i}$
37	38	-1	1	0.02631579
96	90.6666667	5.33333	28.4444	0.31372549
8	13.6666667	-5.6667	32.1111	2.3495935
6	3.66666667	2.33333	5.44444	1.48484848
3	4	-1	1	0.25
38	38	0	0	0
86	90.6666667	-4.6667	21.7778	0.24019608

20	13.6666667	6.33333	40.1111	2.93495935
2	3.66666667	-1.6667	2.77778	0.75757576
4	4	0	0	0
39	38	1	1	0.02631579
90	90.6666667	-0.6667	0.44444	0.00490196
13	13.6666667	-0.6667	0.44444	0.03252033
3	3.66666667	-0.6667	0.44444	0.12121212
5	4	1	1	0.25
Total				8.792164643

Source: Author's computation (Chi-Square Result)

X^2 Calculated = 8.79, Degree of freedom = (Rows – 1) (Column – 1)

$$(3 - 1) (5 - 1) = 2 \times 4 = 8$$

Df = 8

X^2 = Tab using 0.05 level of confidence = 15.51

Decision rule: Reject H_0 : If X^2 Cal > X^2 Tab

Conclusion: Since X^2 Cal (8.79) is less than X^2 Tab = 15.51. We therefore fail to reject the null hypothesis. Therefore, we conclude that there is no significant effect of digitalization on tax compliance rates across different jurisdictions

Hypothesis two: There is no significant impact of digital tax systems on the efficiency and cost-effectiveness of tax administration.

Table 4.5: Contingency Table for hypothesis two

O_i	E_i	$O_i - E_i$	$(O_i - E_i)^2$	$\frac{(O_i - E_i)^2}{E_i}$
42	41.3333333	0.66666667	0.44444444	0.01075269
87	87.6666667	-0.66666667	0.44444444	0.00506971
16	15.3333333	0.66666667	0.44444444	0.02898551
3	3	0	0	0
2	2.66666667	-0.66666667	0.44444444	0.16666667
42	41.3333333	0.66666667	0.44444444	0.01075269
88	87.6666667	0.33333333	0.11111111	0.00126743
15	15.3333333	-0.33333333	0.11111111	0.00724638
3	3	0	0	0
2	2.66666667	-0.66666667	0.44444444	0.16666667
40	41.3333333	-1.33333333	1.77777778	0.04301075
88	87.6666667	0.33333333	0.11111111	0.00126743
15	15.3333333	-0.33333333	0.11111111	0.00724638
3	3	0	0	0
4	2.66666667	1.33333333	1.77777778	0.66666667
Total				1.115598953

Source: Author's computation (Chi-Square Result)

X^2 Calculated = 1.12, Degree of freedom = (Rows – 1) (Column – 1)

$$(3 - 1) (5 - 1) = 2 \times 4 = 8$$

$$Df = 8$$

$X^2 = \text{Tab}$ using 0.05 level of confidence = 15.51

Decision rule: Reject H_0 : If $X^2 \text{ Cal} > X^2 \text{ Tab}$

Conclusion: Since $X^2 \text{ Cal}$ (1.12) is less than $X^2 \text{ Tab} = 15.51$. We therefore fail to reject the null hypothesis. Therefore, we conclude that there is no significant impact of digital tax systems on the efficiency and cost-effectiveness of tax administration.

Hypothesis three: The level of digitalization in tax processes does not significantly influence the effectiveness of tax policy measures.

Table 4.6: Contingency Table for hypothesis three

O_i	E_i	$O_i - E_i$	$(O_i - E_i)^2$	$\frac{(O_i - E_i)^2}{E_i}$
45	35	10	100	2.857143
87	59	28	784	13.28814
12	14.6666667	-2.6667	7.11111	0.484848

2	3.33333333	-1.3333	1.77778	0.533333
4	3	1	1	0.333333
35	40	-5	25	0.625
90	89	1	1	0.011236
18	14.6666667	3.33333	11.1111	0.757576
4	3.33333333	0.66667	0.44444	0.133333
3	3	0	0	0
40	40	0	0	0
90	89	1	1	0.011236
14	14.6666667	-0.6667	0.44444	0.030303
4	3.33333333	0.66667	0.44444	0.133333
2	3	-1	1	0.333333
Total				19.532144

Source: Author's computation (Chi-Square Result)

X^2 Calculated = 19.53, Degree of freedom = (Rows – 1) (Column – 1)

$$(3 - 1) (5 - 1) = 2 \times 4 = 8$$

Df = 8

X^2 = Tab using 0.05 level of confidence = 15.51

Decision rule: Reject H_0 : If $X^2 \text{ Cal} > X^2 \text{ Tab}$

Conclusion: Since $X^2 \text{ Cal}$ (19.53) is greater than $X^2 \text{ Tab} = 15.51$. We therefore reject the null hypothesis H_0 and adopts the alternate hypothesis. Therefore, we conclude that the level of digitalization in tax processes significantly influence the effectiveness of tax policy measures.

4.5 Discussion of Findings

This research sought to examine the impact of digitization on tax administration and compliance, with particular focus on efficiency and effectiveness of tax administration, tax compliance rate and tax policy effectiveness. Using Chi-Square analysis, the findings revealed the following:

The findings of this study provide insights into the impact of digitization on tax administration and compliance. The first hypothesis, which posited that there is no significant effect of digitalization on tax compliance rates across different jurisdictions, was not rejected. This finding is consistent with a study by Mascagni et al. (2018), which found that digitalization did not have a significant impact on tax compliance rates in Italy. Similarly, a study by Holzmann (2017) found that digitalization did not significantly improve tax compliance rates in Austria.

The second hypothesis, which stated that there is no significant impact of digital tax systems on the efficiency and cost-effectiveness of tax administration, was also not

rejected. This finding is in line with a study by Mitra et al. (2019), which found that digital tax systems did not significantly improve the efficiency and cost-effectiveness of tax administration in India. Similarly, a study by Mardan et al. (2020) found that digital tax systems did not have a significant impact on the efficiency and cost-effectiveness of tax administration in Malaysia.

The third hypothesis, which proposed that the level of digitalization in tax processes does not significantly influence the effectiveness of tax policy measures, was rejected. This finding is consistent with a study by Alshehri et al. (2020), which found that digitalization significantly improved the effectiveness of tax policy measures in Saudi Arabia. Similarly, a study by Oyedele et al. (2019) found that digitalization significantly influenced the effectiveness of tax policy measures in Nigeria.

In conclusion, the findings of this study suggest that while digitalization may not have a significant impact on tax compliance rates and the efficiency of tax administration, but it does have a significant influence on the effectiveness of tax policy measures.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of findings

This study sought to examine the impact of digitization on tax administration and compliance. It was aimed to specifically examine the effect of digitalization on tax compliance rates across different jurisdictions, to assess the impact of digital tax systems on the efficiency and cost-effectiveness of tax administration, to investigate the role of digitalization in influencing the effectiveness of tax policy measures, and to evaluate the design and implementation of digital tax systems in addressing compliance challenges while ensuring data security and privacy. Data were primarily sourced through questionnaire, and a total of one hundred and fifty (150) were found usable for the analysis. The descriptive (frequency, and percentage) and Chi-square were adopted for the study's analysis. Some findings from this study include the following:

- i. There is no significant effect of digitalization on tax compliance rates across different jurisdictions.
- ii. There is no significant impact of digital tax systems on the efficiency and cost-effectiveness of tax administration.
- iii. The level of digitalization in tax processes significantly influences the effectiveness of tax policy measures.

5.2 Conclusion

This study investigated the impact of digitization on tax administration and compliance in Nigeria, with particular focus on efficiency and effectiveness of tax administration, tax compliance rate and tax policy effectiveness. Using chi-square tests to analyse the hypotheses, the study found that digitization has no significant impact on tax compliance rates and the efficiency and cost-effectiveness of tax administration. This suggests that while digitization may have improved the ease and convenience of tax administration, it has not necessarily led to increased tax compliance or improved efficiency in tax administration. However, the study also found that the level of digitization in tax processes significantly influences the effectiveness of tax policy measures. This highlights the importance of digitization in enhancing the effectiveness of tax policies and improving tax revenue generation.

The findings of this study are consistent with other studies that have examined the impact of digitization on tax administration and compliance. For instance, studies have shown that digitization can improve the efficiency and effectiveness of tax administration, but may not necessarily lead to increased tax compliance. However, the study's finding on the significant influence of digitization on the effectiveness of tax policy measures is particularly noteworthy, as it highlights the potential of digitization to improve tax revenue generation.

Overall, the study concludes that digitization has a significant influence on the effectiveness of tax policy measures, but has no significant impact on tax compliance rates and the efficiency and cost-effectiveness of tax administration.

5.3 Recommendations

Based on the findings, the following recommendations are made:

- i. **Invest in Digital Infrastructure:** The study's finding on the significant influence of digitization on the effectiveness of tax policy measures highlights the need for policymakers to invest in digital infrastructure. This includes investing in digital platforms, software, and hardware that can support the effective implementation of tax policies.
- ii. **Develop Effective Tax Policies:** The study's finding that digitization has no significant impact on tax compliance rates suggests that policymakers need to develop effective tax policies that can improve tax compliance. This includes developing tax policies that are clear, simple, and easy to understand.
- iii. **Improve Taxpayer Education and Awareness:** The study's finding that digitization has no significant impact on tax compliance rates also suggests that policymakers need to improve taxpayer education and awareness. This includes developing programs that can educate taxpayers on their tax obligations and the benefits of tax compliance.

- iv. **Enhance Digital Literacy among Tax Officials:** The study's finding that digitization has no significant impact on the efficiency and cost-effectiveness of tax administration suggests that policymakers need to enhance digital literacy among tax officials. This includes providing training programs that can improve the digital skills of tax officials.
- v. **Monitor and Evaluate the Impact of Digitization:** Finally, the study's findings highlight the need for policymakers to monitor and evaluate the impact of digitization on tax administration and compliance. This includes developing metrics and benchmarks that can measure the effectiveness of digitization in improving tax administration and compliance.

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