ANUK COLLEGE OF
PRIVATE SECTOR
Accounting Journal

VOL. 2 NO. 1 APRIL, 2025

A Publication of College of Private Sector
Accounting
ANAN University Kwall, Plateau State, Nigeria.

Published April, 2025.

Web Address: https://www.anukpsaj.com, Email: anukpsaj@gmail.com

Printed by:
MUSSAB Printers,
NB, 9 Muri road by gwari road, Kaduna State, Nigeria.
Phone contact: 07038776658,
Email: meetsuleiman009@gmail.com

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Sequence of Manuscript

I. Title page
II. Abstract (150-250 words)
III. Keywords (3-5)
IV. Introduction
V. Literature Review
VI. Methodology
VII. Results and Discussion
VIII. Conclusion and Recommendations
IX. References (APA 7th Edition)
X. Appendices (if necessary)
XI. Author Biographies (optional)

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EFFECT OF DIGITALISED ACCOUNTING PRACTICES ON FINANCIAL ACCOUNTABILITY OF MINISTRIES, DEPARTMENTS, AND AGENCIES (MDAs) IN NIGERIA

ABDULRAHMAN KADIR
Kwara State University, Malete, Nigeria; Email idilobe19@gmail.com,
Phone number +234 806 0112 230

MUBARAQ SANNI
Kwara State University, Malete, Nigeria; Email dr.smubaraq@gmail.com,
Phone number +234 803 0817 202

OLUSEGUN OPEYEMI ONI
Agricultural & Rural Management Training Institute (ARMTI), Ilorin, Nigeria; Email; segunooni@gmail.com;
Phone number: +2348032319240

ABSTRACT

In the face of persistent financial mismanagement and inefficiencies, digitalized accounting systems have emerged as vital tools for enhancing transparency, efficiency, and accountability in public financial management. In response, government agencies in Nigeria are increasingly adopting digital accounting solutions to improve public financial management, and accountability. However, the effectiveness of these practices remains crucial. This study therefore, examines the effect of digitalised accounting practice on the financial accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria. This research specifically focuses on digitalized tax administration, treasury management, financial management, and personnel payroll management. Data were gathered within the office of the auditor general of the federation in Nigeria using questionnaire and analyzed using descriptive statistics and regression techniques. The findings reveal that while digitalized treasury management (P=0.000), financial management (P=0.000), and personnel payroll management practices (P=0.003) positively and significantly influence financial accountability. Also, digitalized tax administration shows a negative relationship with accountability (P=0.000), indicating challenges in implementation. The study concluded that digitalized accounting practices boost financial accountability in Nigerian MDAs, with digitalized treasury, financial, and payroll management having positive impacts. The study recommends among others, the need for more robust audit trails in digital tax systems, continued expansion of treasury management practices, and comprehensive implementation of digital financial management systems to enhance procurement and asset management processes.

Keywords: Digitalized Accounting Practices, Financial Accountability, Ministries, Departments, Agencies, Financial Management Information Systems (FMIS).

1.0 Introduction

Accountability in the public sector is essential for ensuring that public officials responsibly manage resources and serve the interests of the people. It encompasses transparency, efficiency, and integrity in financial management, and is vital for building public trust in governance. Over the years, digitalization has emerged as a transformative tool for enhancing accountability by providing real-time monitoring and reducing opportunities for corruption. Digital accounting systems have become indispensable in promoting good governance, especially in countries where traditional accounting practices have proven inadequate for the complexities of modern public administration (Diamond & Khemani, 2006).

Globally, countries like Estonia and Singapore have successfully implemented digital accounting systems, significantly improving transparency and reducing corruption. These systems have streamlined processes, improved financial management, and fostered public confidence in governance (Lember, 2018). However, developing countries, especially in Sub-Saharan Africa, face challenges such as weak institutional frameworks, inadequate infrastructure, and corruption, which hinder the successful adoption of digital accounting practices (Oladimeji & Adetula, 2021).

The Nigerian public sector has consistently faced challenges related to inefficiency, budget mismanagement, and corruption. Despite numerous reform efforts, including the implementation of digital accounting systems such as the Treasury Single Account (TSA) and the Integrated Payroll and Personnel Information System (IPPIS), financial mismanagement remains a persistent issue (Ihenyen & Robert, 2023). While these initiatives hold considerable promise, their outcomes have been undermined by non-compliance, slow implementation, and weak institutional frameworks (Rotimi et al., 2021).

Therefore, while digital accounting practices have proven effective in enhancing transparency and financial accountability globally (Diamond & Khemani, 2006; Lember, 2018), their implementation in Nigeria's public sector has faced significant challenges. The persistence of inefficiency, corruption, and budget mismanagement despite reforms underscores the need for more robust institutional frameworks and commitment to governance reforms (Oladimeji & Adetula, 2021; Rotimi et al., 2021). This study seeks to address these gaps by investigating the impact of digitalized tax administration, treasury management practices, financial management information systems, and personnel payroll services on the financial accountability of MDAs in Nigeria. By examining these critical dimensions, the research aims to provide insights into how digital accounting practices can be leveraged to strengthen financial governance and enhance public trust in Nigeria.

Research Hypotheses

H01: Digitalized tax administration practices do not significantly influence accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria.

H02: Digitalized treasury management practices do not significantly affect accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria.

H03: Digitalized financial management practices have no significant relationship with accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria.

H04: Digitalized personnel management practices do not significantly influence accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria.

2.0 Literature Review

The literature review provides an in-depth analysis of existing research on financial accountability and various concepts of digital accountability, the underpinning theory and empirical studies that have examined digital accounting practices and its effect on the financial accountability of government entities in Nigeria were presented in this section.

Accounting Practice in the Public Sector

Public sector accounting encompasses the financial practices utilized by organizations established, operated, and financed by the government for the public good, distinct from private entities where control resides with the public and service provision, rather than profit, is the primary aim (Smith, 2017). This accounting framework facilitates the tracking of assets, liabilities, capital, income, and expenditure, ensuring transparency and accountability in managing public resources (EY, 2014; Bellon et al., 2022).

Digitalization of Government Accounting Practices

The digitalization of government accounting practices represents a transformative shift from traditional paper-based systems to fully electronic document management, addressing the need for more efficient, transparent, and accountable financial management (Decman et al., 2022). This transition involves the implementation of integrated document management systems, automated recording, and e-invoicing, which not only streamline accounting operations but also elevate the role of accountants from record-keepers to strategic decision-makers (EY, 2014; Smith, 2018). The digitalization of government accounting practices in Nigeria has evolved in response to the need for more efficient, transparent, and accountable financial management systems. With the rapid advancement of Information and Communication Technology (ICT), Nigerian Ministries, Departments, and Agencies (MDAs) have increasingly adopted digital accounting systems to enhance their financial operations

Digitalized Tax Administration Practices

Digital tax administration in Nigeria, led by the Federal Inland Revenue Service (FIRS), includes electronic filing, online payments, e-tax clearance certificates, and digital TIN registration. These initiatives simplify processes, reduce bureaucratic delays, and curb corruption by limiting human interaction. While e-filing and electronic registration enhance transparency and compliance, challenges like limited access to technology and data security concerns persist (Ahmed et al., 2023; Oru & Odumusor, 2019). Digitalization has also improved tax collection and audits, covering VAT, PIT, and CIT at federal and state levels. Streamlined processes enhance transaction tracking and accountability, supporting economic development. E-audits further reduce corruption risks by minimizing human involvement and improving tax assessment accuracy (Pierce & Moulton, 2023; Folorunso & Simeon, 2021).

Digitalized Treasury Management Practices

The Treasury Single Account (TSA) in Nigeria, initially proposed in 2012 and fully implemented under the Buhari Administration, consolidates all government accounts into a unified system for efficient financial management. It enhances transparency, oversight, and fiscal accountability by providing a clear view of the government's cash position, thus curtailing financial excesses (Legist, 2015; Onodi et al., 2020). The TSA integrates digital tools like Electronic Funds Transfer (EFT), a Centralized Accounting System, Automated Reconciliation Processes, and real-time reporting, which streamline transactions, improve accuracy, and enable responsive financial oversight (Effiong & Obun, 2020; Allison & Ndukwe, 2021). Advanced security protocols further protect financial data against cyber risks, ensuring the integrity of government financial operations (Legist, 2015; Allison & Ndukwe, 2021).

Financial Management Information System Practices

Financial Management Information Systems (FMIS) have revolutionized public financial management, integrating processes such as budgeting, treasury operations, accounting, and reporting. In Nigeria, the Government Integrated Financial Management Information System (GIFMIS) and the Integrated Personnel and Payroll Information System (IPPIS) exemplify digitalized practices in this domain. GIFMIS enhances inventory and asset management by providing comprehensive tracking, supports informed budgetary decisions, modernizes procurement management, and promotes transparency through efficient financial reporting (Udoh, 2022; Ezenwoke et al., 2019; Ihenyen & Robert, 2023). IPPIS, introduced in 2006, automates payroll to eliminate ghost workers, improve data management, and streamline federal salary processes, reflecting a commitment to IT-driven financial governance (Uyanah et al., 2021; Olowu, 2022).

Digitalized Personnel Payroll Services

Digitalized Personnel Payroll Services, particularly through Nigeria's Integrated Personnel and Payroll Information System (IPPIS), have revolutionized payroll management in the federal civil service since its launch in 2006. The system automates payroll processes, ensuring accurate calculations, regulatory compliance, and enhanced data security while addressing issues like ghost workers and fraud. IPPIS integrates diverse HR functions and personnel information, creating a comprehensive database that supports manpower planning, decision-making, and administrative efficiency. Its robust financial reporting and audit trails promote transparency, accountability, and adherence to regulatory standards, reflecting the government's commitment to IT-driven reforms in public service (Uyanah et al., 2021; Olowu, 2022; Ahmed et al., 2023).

Financial Accountability

Financial accountability, constituting one segment among political, social, and administrative accountability, revolves around the responsibility of individuals handling resources or occupying positions of trust to transparently report on the intended and actual use of financial resources or designated offices (Onuorah & Appah, 2012). It entails officers answering to those who entrusted them with financial resources, necessitating accurate reporting within established rules and regulations (Adegite, 2010). This obligation extends to providing precise explanations regarding financial resources held, adhering to laws, accounting principles, and ensuring the legitimacy of expenditures. In the public sector, financial accountability guarantees value for society's money and prevents the diversion of public financial resources for private use (Ejere, 2012). Financial accountability's essence lies in conforming to laws, maintaining consistency with accounting principles, and ensuring accuracy, fairness, and legitimacy in expenditure reports (Ejalonibu, 2022). This ensures that financial performance and government activities are transparent, subject to public scrutiny, and that individuals are held accountable for associated financial resources (Boven, 2007).

Theoretical Framework

To establish a solid theoretical foundation for understanding the impact of digital accounting practice on the financial accountability MDAs in Nigeria, this study drew upon the Technology Acceptance Model (TAM) and Agency theory. These theories were employed to analyze the correlation between the components of financial accounting practices and financial accountability of MDAs in Nigeria.

The Technology Acceptance Model (TAM) was developed by Davis (1989) and later refined by Venkatesh and Bala (2008), emphasizes that perceived usefulness and perceived ease of use are critical determinants of technology adoption. TAM helps elucidate how MDAs perceive and adopt digitalized tax systems, such as e-filing and online payment platforms. When MDAs recognize these systems as beneficial for enhancing the efficiency of tax processes and improving transparency, they are more inclined to adopt them. The adoption enhances accountability by ensuring that tax administration becomes more efficient and transparent. As noted by Venkatesh et al., (2003), effective implementation of such systems can significantly improve accountability by reducing opportunities for fraud and improving the accuracy of tax reporting. TAM provides valuable insights into how digital financial management tools such as e-budgeting and online auditing systems are adopted by MDAs.

This study also utilizes agency theory which focuses on the effect of digitalized treasury management practices on accountability. Agency Theory, as articulated by Jensen and Meckling (1976), addresses the challenges that arise when decision-making and execution are separated, often leading to issues such as moral hazard and adverse selection. In the Nigerian public sector, digital treasury management systems can mitigate these challenges by providing better oversight and reducing agency costs. For example, digital tools that track and report on treasury activities in real time can reduce the opportunities for financial mismanagement and corruption, ensuring that government funds are used appropriately and transparently (Nwokedi, 2021).

Empirical Studies

Olaoye and Talabi (2019) examined the impact of treasury single account (TSA) on the financial performance of deposit money banks (DMBs) in Nigeria using a pre-post analysis. Utilizing Earning per Share (EPS), Profit after Tax (PAT), Return on Equity (ROE) and Return on Assets as variables. The study explored secondary data and employed paired sampled t-test analytical technique. It was discovered that TSA exerts a positive insignificant impact on all the indicators of profitability covered by this study except Profit after Tax (PAT) that has a negative insignificant impact.

Allison and Ndukwe (2021) evaluated the role of treasury single account (TSA) in achieving public accountability in Nigeria public sector. The study adopted the content analysis as means of gathering and analysis of data. The study observed that the implementation of Treasury Single Account has enthroned centralized, transparent and accountable revenue management in Nigeria by instilling fiscal discipline and ensuring effective aggregate control over government cash balances. The study finds that the only way Nigeria can fight the intense pressure on their cash flows in the face of dwindling revenues and decreasing statutory and social responsibilities is to strengthen and sustain the Treasury Single Account (TSA) scheme.

Mosteanu and Faccia (2020) evaluated the digital systems and new challenges of financial management–FinTech, XBRL, blockchain and cryptocurrencies. Adopted exploratory research, based on investigative techniques. The study finds that the convergence of the IFRSs and US GAAPs accounting standards allows uniformity in the presentation of the financial statements in every part of the world.

Ibrahim et al., (2022) evaluated the influence of integrated financial management information system (IFMIS) on the performance of government entities in Nigeria. Adopting survey research design, the study employed Partial Least Square and Thematic/NVIVO analytical tools. The study finds that IFMIS significantly influence financial and non- financial performance of government entities with limitations of various challenges.

Safo (2020) examined the effectiveness of integrated financial management information system (IFMIS) as tool to control expenditure in metropolitan, municipal and district assemblies (MMDAS). The study adopted survey research design and the data collected was analyzed using descriptive statistics and regression techniques. Findings show that GIFMIS usage has been able to control expenditure by monitoring payment and budget controls and efficiency, transparent and accountability in financial management. The study further shows that network failure and nonexistence of training plan as the major challenge in the usage of GIFMIS.

Exploring a case analysis of University of Uyo, Udoh (2022) examined the public financial management and the nexus of IPPIS in Nigerian Federal Universities. The study adopted survey research design and employed descriptive and contextual approaches. The finding revealed that government intention was actually right at the inception of the Integrated Payroll and Personnel Information System (IPPIS) in Nigeria, but the pains associated with it far outweigh the gains of IPPIS, as an attempt to frustrate staff welfare which is tantamount to bad governance.

Onodi et al., (2020) studied treasury single account (TSA) implementation and financial performance of commercial banks in Nigeria. The study employed expo-facto survey research design, while using tax, return on equity and return on assets, and Customers deposit as variables. The data collected were analyzed using comparable mean, while research hypotheses were tested using Simple regression analysis. The findings show that customers' deposit has a significant effect on profit after tax, return on assets and return on equity of commercial banks in Nigeria.

Ejoh (2020) evaluated the treasury single account (TSA) implications on government revenue control among federal government parastatals in Nigeria. The study adopted survey research design and was analysed using Univariate Regression Models. The analyzed results indicated that TSA has significant and positive impact on cash monitoring and control and adequate fund flows for government project implementation. On the other hand, TSA policy significantly reduces idle government cash balances with other banks. The study finds that TSA policy enhances government revenue control and administration in Nigeria.

3.0 Methodology

The study adopts survey research design, which centers around gathering information directly from the field based on questions pertaining to the primary purpose of the study. Primary data were used for analysis, with the population consisting of 588 eligible auditors from various ranks within the Offices of the Auditor-General for the Federation (AoGF), identified from the staff Nominal Rolls as of December 2021. These auditors, ranging from Grade Level 12 to 17, were selected due to their extensive knowledge of the operational activities of Nigeria's ministries, departments, and agencies (MDAs). This study adopts the Krejcie and Morgan (1970) formula and table to determine the sample size. Thus, a sample size of 233 was used for the study.

This study employed a two-stage sampling technique. In the first stage, a stratified random sampling approach was implemented, utilizing proportionate allocation. The proportionate stratified method of probability sampling was employed to allocate an appropriate sample size to each stratum. The second phase involved purposeful sampling, a deliberate choice made due to the acknowledgment that not all members of the population would have an equal opportunity to be included in the survey. Utilizing a non-probability sampling approach acknowledges the potential for bias in sample selection, resulting in estimates with limited precision (Kothari, 2004; Zikmund et al., 2017). The breakdown is shown in Table 1

The breakdown is shown in Table1 1

Table 1: Sample Size Apportionment

Auditors' Rank	Population	Proportionate Stratified Sampling	Sample Size
AuGF	1	1/588x233	1
Director of Audit	22	22/588x233	8
Deputy Director Audit	50	50/588x233	19
Assistant Director	80	80/588x233	32
Chief Auditor	62	62/588x233	25
Chief Executive Officer	41	41/588x233	16
Assistant Chief Auditor	136	136/588x233	54
Assistant Chief Executive Officer	9	9/588x233	4
Principal Auditor	187	187/588x233	74
Total	**588**		**233**

Source: Author's Computation, 2024

Model Specification

This research extends and adapts the model initially proposed by Ezenwaka, Obi, and Okudo (2022), making targeted modifications to better align with the study's specific objectives and context. These adjustments enhance the model's applicability to the financial accountability of MDAs in Nigeria. The modified version of the model is specified as follow:

$$FACC_i = \beta_{0i} + \beta_1 TEFR_i + \beta_2 TCP_i + \beta_3 TAAR_i + \mu_i \quad \text{……} (1)$$
$$FACC_i = \beta_{0i} + \beta_1 EFT_i + \beta_2 CAS_i + \beta_3 ARP_i + \beta_4 RTRM_i + \beta_5 SDPM_i + \beta_6 IOGS_i + \mu_i \quad \text{……} (2)$$
$$FACC_i = \beta_{0i} + \beta_1 INVM_i + \beta_2 ASSM_i + \beta_3 BUP_i + \beta_4 PRM_i + \beta_5 FRT_i + \mu_i \quad \text{……} (3)$$
$$FACC_i = \beta_{0i} + \beta_1 PAU_i + \beta_2 PIM_i + \beta_3 PDI_i + \beta_4 DMS_i + \beta_5 FRE_i + \mu_i \quad \text{……} (4)$$

Where;

FACC = Financial Accountability of MDAs
β_0 = Constant
TEFR = Tax Electronic Filing and Registration
TCP = Tax Collection and Payments
TAAR = Tax Accounting and Audit Review

EFT =Electronic Funds Transfer
CAS = Centralized Accounting System
ARP = Automated Reconciliation Processes
RTRM = Real-time Reporting and Monitoring
SDPM = Security and Data Protection Measures
IOGS = Integration with Other Government Systems

INVM = Inventory Management
ASSM = Asset Management
BUP = Budgetary Practices
PRM = Procurement Management
FRT = Financial Reporting and Transparency
PAU = Payroll Automation
PIM = Personnel Information Management
DIN = Personnel Data Integration
TDM = Deduction Management Statutory
FRE = Financial Reporting
β_1 = The coefficient of TEFR, EFT, INVM, & PAU
β_2 = The coefficient of TCP, CAS, ASSM, & PIM
β_3 = The coefficient of TAAR, ARP, BUP, & PDI
β_4 = The coefficient of RTRM, PRM, & DMS
β_5 = The coefficient of SDPM, FRT, & FRE
β_6 = The coefficient of IOGS
μ = error term

Model Estimation Technique

The study utilized Ordered Logistic Regression (OLR) as the primary inferential statistical method for data analysis. OLR is a robust regression technique suitable for cases where the dependent variable is ordinal, meaning the outcomes have a natural order but the intervals between categories are not uniform (Long & Freese, 2014).

4.0 Data Presentation, Analysis and Discussion of Findings

Descriptive Result
The results of the descriptive analysis are presented in Figure 1 to describe the socio-demographic indicators included in the study. This analysis helps to understand the distribution of participants.

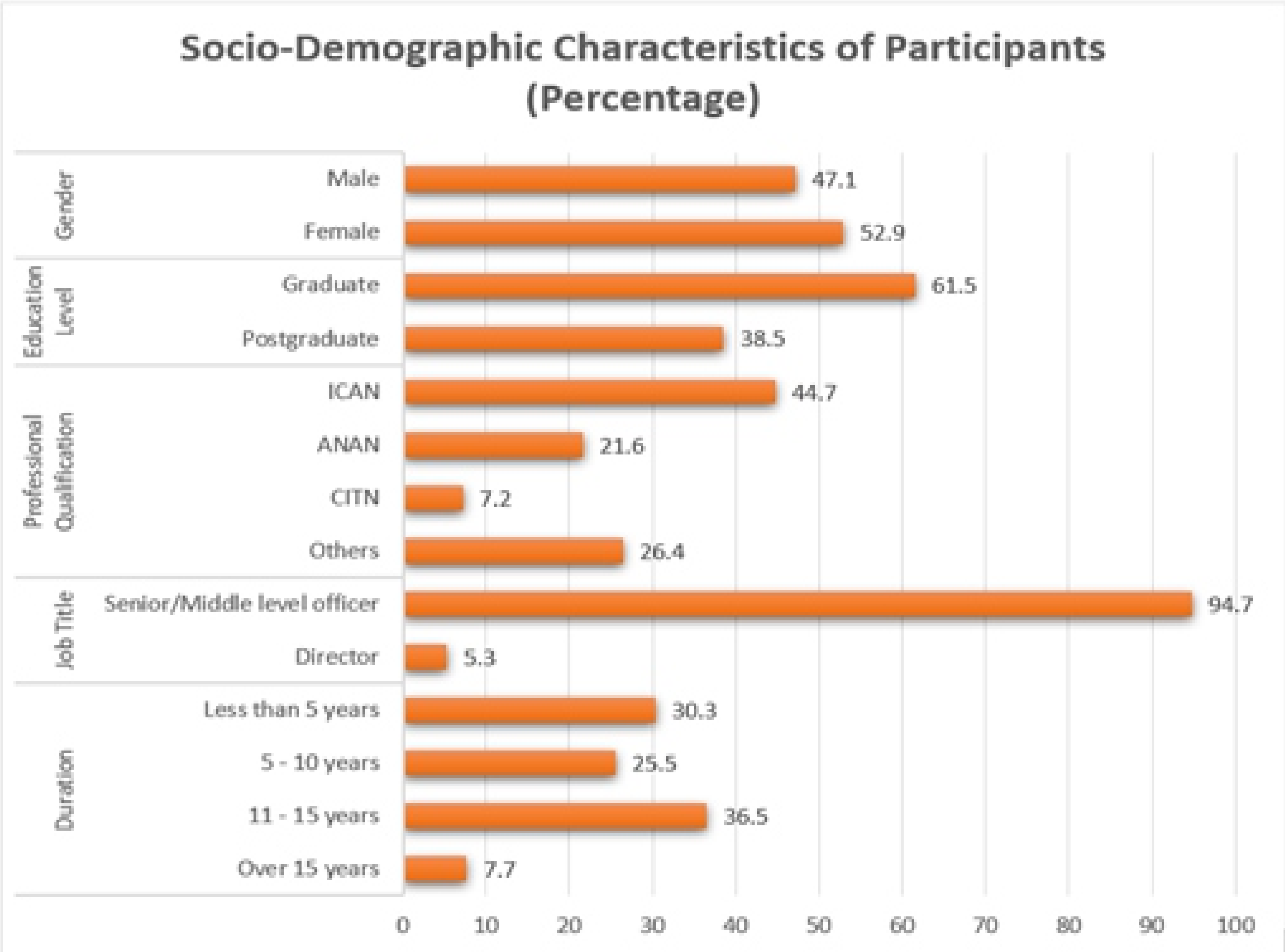

Figure 1: Socio-Demographic Characteristics of the Respondents

The results indicate a nearly equal gender distribution among employees in the Office of the Auditor General, with 52.9% being female and 47.1% male. In terms of educational qualifications, most respondents (61.5%) are graduates, while 38.5% hold postgraduate degrees. Regarding professional certifications, 44.7% possess ICAN, making it the most common certification, followed by 21.6% with ANAN and 7.2% with CITN. The majority of employees (94.7%) hold senior or middle-level positions, while 5.3% are directors. In terms of service years, 30.3% have less than 5 years of experience, 36.5% have 11-15 years, and 7.7% have over 15 years in service.

Preliminary Estimation Techniques
Normality Test and Correlation Analysis of the Variables
Tables 2 present the preliminary estimation methods used in this study. These include the normality tests, and correlation analysis.

Normality Test	Skewness	Kurtosis
Variables	Statistic	Statistic
Financial Accountability	0.735	-0.702
Social Accountability	0.771	-0.427
Administrative Accountability	0.272	-0.874
Digitalized tax administrative practices	0.145	-1.036
Digitalized treasury management practices	0.212	-1.040
Digitalized financial management practices	0.148	-1.042
Digitalized personnel management practices	0.123	-0.879

Source: Author's Computation (2024)

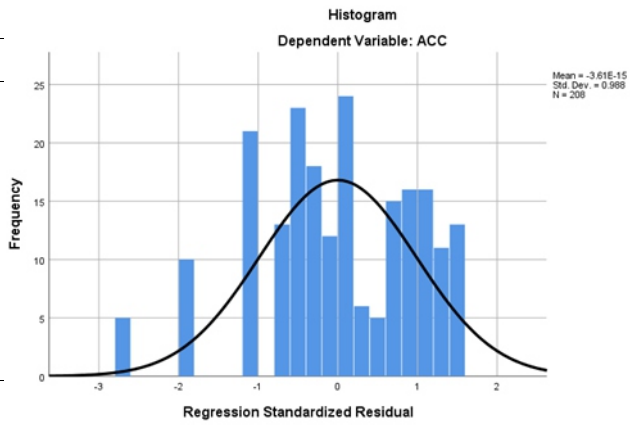

Figure 2: Normality Diagnostic Test
Source: Author's drawing, (2024)

Table 2 shows the skewness and kurtosis statistics, with all skewness values falling within the acceptable range of +3 to -3, indicating that the variables are normally distributed (Asika, 1991). This normal distribution supports the assumption of linearity necessary for conducting a linear regression analysis. Also, the histogram in Figure 2 confirms a linear relationship between the dependent and independent variables, meeting the assumptions for the regression model used in the study.

Table 3: Pairwise Correlation Matrix

Variables	FACC	DTAP	DTMP	DFMP	DPMP
FACC	1				
DTAP	-0.082	1			
DTMP	-0.146*	0.467**	1		
DFMP	-0.306**	0.332**	0.477**	1	
DPMP	-0.430**	0.305**	0.334**	0.230**	1

Source: Author's Computation ((2024))
Explanatory Notes: FACC = Financial accountability; DTAP = Digitalized Tax Administration Practices; DTMP = Digitalized Treasury Management Practices; DFMP = Digitalized Financial Management Practices; DPMP = Digitalized Personnel Payroll Management Practices

Table 3 presents the pairwise correlation matrix, which revealed that the coefficients relating to the independent variables are below 0.8, which implies that inclusion of these variables in the regression analysis would not lead to a problem of severe multicollinearity (Kennedy, 2008). This study further employed variance inflator factor (VIF).

Table 4: Variance Inflator Factor

Variables	N	VIF	Tolerance Va lue
Digitalized tax administrative practices	208	2.842	0.352
Digitalized treasury management practices	208	2.563	0.180
Digitalized financial management practices	208	2.626	0.381
Digitalized personnel management practices	208	2.206	0.453

Source: Author's Computation (2024)

The Variance Inflated Factor (VIF) and tolerance value, the coefficients as shown on Table 4 have VIF less than 5, which aligns with the result obtained in the correlation analysis. Accordingly, none of the variables has high VIF which implies the absence of multicollinearity among the independent variables adopted in the study. The study proceeds to employing factor analysis on items under financial accountability, in order to select the most important component that will be used in the ordinal regression analysis.

Principal Component Analysis

Table 5: Total Variance Explained Result for Financial Accountability

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	**Total**	**% of Var**	**Cumulative**	**Total**	**% of Var**	**Cumulative**
Component 1	2.883	72.085	72.085	2.883	72.085	72.085
Component 2	0.514	12.853	84.938			
Component 3	0.438	10.954	95.892			
Component 4	0.164	4.108	100.000			

Source: Author's Computation, (2024)

The principal component analysis in Table 5, conducted for the financial accountability constructs, retained one component with an eigenvalue greater than 1, explaining 72.08% of the total variance in financial accountability. Communalities, representing the proportion of variance explained by the principal components, were examined to identify any variables with low extraction values (below 0.40), which could improve the analysis by being removed. However, none of the factors had extraction values lower than 0.4 (Watkins, 2018). For the regression analysis, the factor with the highest extraction communality was retained, and it was identified as question one: "The use of digital accounting systems has enhanced transparency in financial reporting within MDAs in Nigeria," with a communality value of 0.846. This factor was considered the best representative of financial accountability in the model.

Table 6: Component Matrix[a]

Financial Accountability	Component 1
The use of digital accounting systems has enhanced transparency in financial reporting within MDAs in Nigeria.	0.920
I am confident that the implementation of digital accounting systems has contributed to the reliability of financial information within MDAs in Nigeria,	0.771
The adoption of digital accounting has improved the tracking and monitoring of government expenditures, preventing financial mismanagement of MDAs in Nigeria	0.884
Digital accounting systems facilitate compliance with financial regulations and standards in government financial management of MDAs in Nigeria	0.813
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: Author's Computation, (2024)

The result of the component matrix in Table 6 for the financial accountability constructs further buttress that question one (1) stated as "The use of digital accounting systems has enhanced transparency in financial reporting within MDAs in Nigeria." is the most important component among all the items with the highest absolute value of 0.920, which is greater than other items. This component is therefore, employed in the regression model as the dependent variable for financial accountability in ministries, departments, and agencies in Nigeria.

Effect of Digital Accounting Practices on Financial Accountability

This section presents the ordered logistic regression results of the effect of digital accounting practices on financial accountability of ministries, departments, and agencies in Nigeria. This is presented in Table 7.

Table 7: Ordered Logistic Regression Result for Financial Accountability

Variables	Coefficient	Std. Err.	T	p-value
Digitalized tax administration practices	-1.848	0.478	-3.87	0.000
Tax electronic filing and registration	0.018	0.169	0.11	0.916
Tax collection and payments	0.325	0.175	1.86	0.064
Tax accounting and audit review	-0.723	0.268	-2.69	0.007
Digitalized treasury management practices	2.392	0.672	3.56	0.000
Electronic funds transfer	1.172	0.291	4.03	0.000
Centralized accounting system	0.887	0.318	2.78	0.005
Real-time reporting and monitoring	-0.213	0.276	-0.77	0.441
Security and data protection measures	1.282	0.311	4.13	0.000
Integration with other government systems	0.017	0.269	0.06	0.950
Digitalized financial management practices	1.949	0.472	4.13	0.000
Inventory management	-0.128	0.183	-0.70	0.487
Asset management	0.986	0.219	4.49	0.000
Budgetary practices	0.366	0.176	2.08	0.037
Procurement management	1.663	0.261	6.37	0.000
Financial reporting and transparency	0.051	0.228	0.22	0.824
Digitalized personnel payroll management	1.224	0.417	2.93	0.003
Payroll automation	1.021	0.330	3.09	0.002
Personnel information management	-0.521	0.335	-1.56	0.120
Personnel data integration	0.553	0.172	3.22	0.001
Deduction management statutory	0.566	0.183	3.09	0.002
Financial reporting	0.069	0.199	0.35	0.727

Main Variables	LR chi2(5) = 154.95 Prob > chi2 = 0.0000 Pseudo R2 = 0.2645
Sub Variables	LR chi2(24) = 77.97 Prob > chi2 = 0.0000 Pseudo R2 = 0.8467

Source: Author's Analysis, (2024)

The analysis in Table 7 reveals that digitalized tax administration negatively influences financial accountability, while digitalized treasury management, digitalized financial management, digitalized personnel payroll management positively impact financial accountability within ministries, departments, and agencies (MDAs) in Nigeria. All five indicators of digital accounting show significant effects on financial accountability. Specifically, digitalized tax administration, digitalized treasury management, digitalized financial management, and digitalized personnel payroll management are identified as essential determinants of financial accountability within these organizations.

The results indicate that digitalized tax administration is a significant predictor of financial accountability, with a negative coefficient of -1.848 (p-value = 0.000), meaning that increases in this area correlate with a 1.848% decrease in the odds of higher financial accountability. Conversely, digitalized treasury management has a positive coefficient of 2.392 (p-value = 0.0000), suggesting a 2.392% increase in the odds of achieving higher financial accountability with its increase. Other significant predictors include digitalized financial management (coefficient = 1.949, p-value = 0.000), digitalized personnel payroll management (coefficient = 1.224, p-value = 0.003). The LR Chi-Squared statistic value of 154.95 (p-value = 0.0000) confirms that all digital accounting practices collectively contribute significantly to predicting financial accountability within Nigerian MDAs.

Discussion of findings

The study's findings reveal a significant relationship between digitalized tax administration practices and the accountability of Ministries, Departments, and Agencies (MDAs) in Nigeria. The composite model indicates that these digital practices negatively impact accountability, evidenced by a coefficient of -0.305 and a p-value of 0.017. This unexpected outcome may stem from challenges in implementing digital tax systems, such as inadequate infrastructure, insufficient training for tax officials, and system complexities that hinder operational efficiency. These factors could contribute to decreased accountability rather than enhance transparency and oversight, corroborating the views of Olowu and Saka (2020) and Akinwale et al., (2021), who noted the weak implementation frameworks in developing economies. The persistent negative effects across various accountability dimensions suggest systemic issues in the implementation and utilization of digital tax systems (Ogunleye et al., 2022).

On the other hand, digitalized treasury management practices show a robust positive effect on accountability, with a coefficient of 0.751 and a p-value of 0.000. This outcome aligns with expectations that automating financial transactions improves transparency and oversight within MDAs, thus reducing opportunities for fraud and mismanagement. Centralized accounting systems play a crucial role in enhancing accountability by ensuring consistency in financial reporting, while effective data protection measures safeguard sensitive information and contribute to the integrity of treasury management processes (Ojo et al., 2021; Adeyemi et al., 2022). However, contrasting views exist, as noted by Olaoye and Talabi (2019), who observed an insignificant impact of treasury management practices on accountability within specific contexts.

Furthermore, digitalized financial management practices significantly enhance accountability across various dimensions, with a coefficient of 0.654 and a p-value of 0.000. The automation and centralization of processes such as budgeting and procurement lead to better tracking of public resources, reducing opportunities for fraud and mismanagement (Adeyemi et al., 2021). Specific components like asset management and procurement management demonstrate strong positive effects on accountability, reinforcing the notion that digital practices contribute to improved financial oversight (Sanni and Adeoye, 2022; Chukwuma and Eze, 2021).

5.0 Conclusion and Recommendations

The study reveals that digitalized tax administration practices are a critical determinant of accountability within Nigeria's ministries, departments, and agencies (MDAs); however, their influence is negative, which diverges from the initial expectations of the research. This unexpected finding highlights the need for a reevaluation of current tax administration practices to enhance their effectiveness in promoting accountability. In contrast, the study identifies that digitalized treasury management practices have a significant positive impact on accountability, suggesting that improved transparency can result from more effective financial oversight. This aligns with the study's hypothesis, reinforcing the notion that robust treasury management is essential for fostering accountability within public sector institutions.

Also, the study establishes that digitalized financial management practices significantly enhance accountability among MDAs, supporting the expectation that managing financial activities through digital channels can improve transparency. Furthermore, the positive impact of digitalized personnel payroll management practices underscores their role in ensuring accurate data and reducing the incidence of ghost workers, which further strengthens accountability. Together, these findings demonstrate the varying influences of different digitalized practices on the overall accountability landscape within Nigeria's public sector, suggesting targeted interventions may be necessary to optimize their effectiveness.

Based on the findings of this study, the following recommendations are made in order to improve financial accountability in Ministries, Departments, and Agencies in Nigeria.

i. To address the negative significant impact of digitalized tax administration on accountability, it is essential that Federal Inland Revenue Service (FIRS) and the Office of the Accountant General of the Federation (OAGF) improve transparency measures within digital tax systems. This includes implementing more robust audit trails and ensuring that all digital processes are subjected to regular independent audits within the MDAs in Nigeria.

ii. Based on the positive significant effects of digitalized treasury management on accountability of MDAs, it is recommended that Office of the Accountant General of the Federation (OAGF) should prioritize the continued expansion and integration of digitalized treasury management systems, for MDAs in Nigeria with a specific focus on enhancing centralized accounting and real-time monitoring capabilities of the current Treasury Single Account (TSA) of the federal government. This will ensure more consistent financial oversight, reduce discrepancies, and promote greater transparency, ultimately strengthening both financial and administrative accountability.

iii. Given that digitalized financial management enhances accountability of MDAs, the study recommends that Ministry of Finance, Budget and National Planning in Nigeria should continue to invest in the comprehensive implementation of current digitalized financial management systems (GIFMIS platform), with a particular focus on enhancing procurement, inventory, and asset management processes.

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