EFFECT OF DIGITALIZED FINANCIAL MANAGEMENT PRACTICES ON ACCOUNTABILITY OF MINISTRIES, DEPARTMENTS, AND AGENCIES (MDAS) IN NIGERIA

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Abstract

Public financial management has been characterized by budget mismanagement, and misappropriation of public funds. Governments are rapidly adopting technology-driven solutions to increase accountability, efficiency, and transparency as a result of the global trend in public sector management toward digitalization. The ongoing public financial management reforms in Nigeria, which seek to update the accounting systems of Ministries, Departments, and Agencies (MDAs), have made digital accounting practices a key component. Sequel to this issue, this study investigated digitalized inventory, asset management and budget practices on financial accountability among ministries, departments, and agencies (MDAs) in Nigeria. Data are collected through survey; the study's population comprises 588 eligible auditors from various ranks within the Offices of the Auditor-General for the Federation (AoGF) while the sample of the study is 233 staffs of Auditor-General for the Federation (AoGF) using Krejcie and Morgan (1970). Given the analysis from the results, the study concludes that digitalized inventory management is negative and statistically significant; leading to the conclusion that digitalized inventory management has no significant effect on accountability in ministries, departments, and agencies in Nigeria, which aligns with the study's expectation. On the other hand, digitalized asset management and digitalized budgetary practices have significant positive and statistically significant; leading to the conclusion that digitalized asset

management and digitalized budgetary practices have significant effect on accountability in ministries, departments, and agencies in Nigeria. Thus, this study recommends 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

Keywords: **Digitalized Inventory Management; Digitalized Asset Management; Budget Practices and Financial Accountability.**

1. Introduction

Accountability has become a pillar to corporate governance issue among public offices especially in developed and developing countries. This encloses transparency in public fund, utilization of government resources and integrity in managing the public belongings. However, in many developed and developing countries digitalization has become essential part of their strategies to improve transparence of public fund, reducing corruption practices and judicious utilization of government resources. The ability to monitor and track financial transactions in real-time has made digital accounting systems indispensable in promoting good governance (Diamond & Khemani, 2006).

Thus, the existence of this global shift has becoming mechanism for transparency and accountability especially in the public offices. Governments have acknowledged that traditional accounting practices are inadequate to cope with the increasing complexity of modern governance, necessitating the adoption of digital financial systems (Diamond & Khemani, 2006). However, in many sub-Sahara Africa countries that are facing corruption practices and manipulation of accounting figures have consequently resulting into inadequate infrastructure, low per capital income and undermining of public resource. While countries such as developed countries that have integrating digitalized system in the accounting practices have improved on accountability and transparency in public fund.

In Nigeria, accountability has become issue undermining the economy, corruption practices and inefficiency of government resources. Public financial management has been characterized by budget mismanagement, inadequate tax collection, and the misappropriation of public funds, which has led to recurring financial scandals within Ministries, Departments, and Agencies (MDAs) (Okonkwo, et al, 2021). Nigeria is routinely ranked among the most corrupt

nations by Transparency International's 2022 Corruption Perception Index, underscoring the nation's governance issues. Despite various reform efforts aimed at combating corruption and improving transparency, the effectiveness of these measures has been called into question, as financial mismanagement persists across multiple levels of government (Ojogiwa & Qwabe, 2021).

However, Nigeria has responded to these difficulties by introducing a number of important measures targeted at improving accountability and moving toward the digitalization of its accounting and financial procedures. Digital accounting practices, including e-filing, online payment platforms, and automated auditing systems, have the potential to revolutionize public financial management by reducing human intervention and ensuring real-time monitoring of financial activities (Onodi, Eyisi, & Akujor, 2020). The Treasury Single Account (TSA), which unifies all government income into a single account to increase accountability and transparency, is one of the most important reforms. The TSA has been widely praised for its success in curbing revenue leakages and improving cash management in MDAs (Oru & Odumusor 2019). Another critical initiative is the Integrated Payroll and Personnel Information System (IPPIS), designed to eliminate ghost workers and improve the efficiency of personnel management in government institutions (Ozekhome, 2022).

However, the social component of accountability was the main focus of recent studies on the subject (Bassey et al., 2023; Chandra & Chowdhury, 2023; Salisu & Ibeogu, 2022; Tapang & Ibiam, 2019; Appah et al., 2021). This created a gap that calls for the need to address the issue of accountability from a financial accountability. More so, studies on digitalization of government operations through E-tax, IPPIS, GIFMIS and TSA have mostly been channeled towards service delivery and combating corruption (Chidi et al., 2022; Ike et al., 2023; Kaoje, 2020; Njoku 2022; Nwozor et al., 2022; Temitope et al., 2023; Amaefule & Iheduru 2014). This study will however concentrate on Inventory management, asset management and budgetary practices. In light of this, this study closes a significant gap.

2. Literature Review

2.1 Conceptual Review

Financial Accountability
Onuorah and Appah (2012) viewed financial accountability as a 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. Officers must provide accurate reporting in accordance with existing norms and regulations since they are answerable to the people who have entrusted them with financial resources (Adegite, 2010). This duty includes following the law, accounting rules, and making sure that expenditures are legitimate in addition to giving detailed explanations of the financial resources maintained. Financial accountability in the public sector ensures that society's funds are used effectively and keeps public funds from being diverted for private purposes (Ejere, 2012).

The fundamental components of financial accountability are following the law, being true to accounting standards, and making sure that spending reports are truthful, equitable, and legitimate (Akotia, 2016). Both before and after the fact, it is required to openly, completely, and equitably explain how financial commitments impacting the community are fulfilled (Akotia, 2016). This guarantees that government operations and financial performance are open to public review, transparent, and that those responsible for related financial resources are held accountable (Annex, 2019). The government must operate and report in accordance with financial regulations while protecting the welfare of the public, which highlights the importance of open access to information regarding public financial services that is unhindered by national security concerns (Akotia, 2016). Since taxes are a major source of funding for the public sector, more research is being done on the effects of trade on the workforce and services offered by the government.

Financial accountability essentially emphasizes the responsibility of those who are entrusted with financial resources to report truthfully, openly, and legally. By ensuring that financial operations adhere to established norms and serve the community while respecting the values of justice, accuracy, and legality, it protects public trust. Effective governance, preventing the misappropriation of public monies, and fostering financial openness all depend on this multifaceted idea.

Inventory Management

Udoh, (2022) described inventory management within the Government Integrated Financial Management Information System (GIFMIS) as a crucial aspect of public financial management that focuses on optimizing the control, tracking, and utilization of government assets. Governments use GIFMIS, a complete financial management system, to improve financial operations' accountability, efficiency, and openness. Inventory management is especially important for managing different government-owned resources and assets in the framework of

GIFMIS. Tracking and documenting government-owned assets, such as supplies, machinery, and materials, is a crucial part of inventory management in GIFMIS. This entails keeping an extensive inventory database that records details such item descriptions, numbers, dates of procurement, and locations. The system allows for real-time monitoring of inventory levels, facilitating timely decision-making regarding replenishment, redistribution, or disposal of assets (Tan & Taeihagh, 2020; Udoh, 2022).

By combining inventory management and financial data, GIFMIS offers a comprehensive picture of the government's asset usage and financial status. Because it takes into account both financial transactions and the tangible assets owned by the government, this integration enables proper budgeting (Tan & Taeihagh, 2020). It makes it possible for authorities to match budgetary allotments with the real requirements for inventory acquisition and maintenance. Putting controls in place to stop theft, mismanagement, and abuse of public resources is another aspect of effective inventory management in GIFMIS. To guarantee that inventory records correspond with physical counts, the system incorporates access controls, frequent audits, and reconciliation procedures (Ibrahim et al., 2022). This promotes accountability, avoids inconsistencies, and protects public resources.

Asset Management

Assets management in the Government Integrated Financial Management Information System (GIFMIS) is a critical component ensuring efficient tracking, utilization, and accountability of government-owned assets (Ezenwoke et al., 2019). GIFMIS has strong modules for asset management from purchase to disposal, and it keeps a centralized database with comprehensive information about each item, including location, condition, and procurement details.

GIFMIS enables real-time monitoring of assets, minimizing the risk of loss or misplacement (Ezenwoke et al., 2019; Kumar et al., 2023). By offering information on asset use, maintenance requirements, and depreciation, it aids in strategic decision-making. Accurate financial reporting is facilitated by GIFMIS's alignment of asset management and budgetary planning through integration with financial data. All things considered, GIFMIS increases openness, lessens the possibility of anomalies pertaining to assets, and encourages prudent management of public funds.

Budgetary Practices

The Government Integrated Financial Management Information Systems (GIFMIS) budgetary procedures are essential for promoting resource allocation, transparency, and fiscal restraint. Financial allocations are in line with company goals because to GIFMIS's ability to support thorough budget planning, execution, and monitoring. From creation to execution, the system's integrated budgetary modules optimize the whole budget cycle (Ihenyen & Robert, 2023).

It guarantees adherence to financial standards, permits the development of accurate budget predictions, and tracks spending against authorized budgets. By offering real-time insights into budget performance, GIFMIS facilitates better decision-making by allowing for prompt modifications and well-informed financial planning. GIFMIS minimizes budgetary disparities, promotes accountability in government spending, and facilitates effective fund usage through automation and data integration (Kumar et al., 2023). A revolutionary step toward modernizing financial management, maximizing resource allocation, and guaranteeing responsible fiscal governance is the implementation of GIFMIS in budgetary procedures.

2.2 Theoretical Review and Framework

In other to build the model of this study, theory such as Technology Acceptance Model, Theory of Innovation Translation, The Theory of Innovation Diffusion, Comparative Treatment Theory, Institutional Theory, Differential Association Reinforcement Theory, and New Public Management Theory (NPM) were reviewed. For instance, The Technology Acceptance Model (TAM) was developed in 2008 by Venkatesh and Bala after Davies' 1989 introduction of the theory of technology acceptance. TAM mainly clarifies how people behave when embracing technology (Maji & Pal, 2017). The impact of perceived utility and perceived ease of use on attitudes toward technology adoption, which impact personal beliefs, is at the heart of Technology Acceptance Models (TAM) (Mpinganjira, 2015). The model provides a fundamental framework for understanding how attitudes, intentions, and internal beliefs are influenced by external variables.

Similarly, theory of innovation translation, this theory, which was put forth by Tatnall in 1990, offers a different viewpoint on the widely accepted theory of innovation spread. According to this hypothesis, prospective adopters reinterpret innovations to suit their unique needs, in contrast to the conventional strategy of embracing innovations as they are proposed or decided upon. Essentially, rather than precisely following the suggested form of the innovation,

potential users adapt it to best fit their current systems. The Federal Inland Revenue Service (FIRS) is the main actor in the e-tax payment system, which is the main innovation in the framework of this study.

Theoretical Framework

Given the evidence from TAM which provides valuable insights into how digital financial management tools such as e-budgeting and online auditing systems are adopted by MDAs. The perceived usefulness of these tools, which include features like real-time budget monitoring and automated auditing, can significantly influence their adoption. When MDAs find these digital financial tools easy to use and beneficial for improving financial management, they are more likely to incorporate them into their operations. This leads to better financial transparency and reduced instances of mismanagement (Davis, 1989; Venkatesh & Bala, 2008). In Nigeria, where issues like budget mismanagement and corruption are prevalent, digital financial tools can play a crucial role in enhancing accountability and ensuring that public funds are managed more effectively (Adedeji, 2019).

2.3 Empirical Review

This study reviewed study that are related to accountability as well as digitalization of financial management for instance, Ezenwoke et al., (2019) carried out a bibliometric study of accounting information systems research from 1975-2017. A bibliometric approach was employed to quantitatively analyze the data collected. Key findings in this work indicated that there was no steady growth in volume of AIS research publication, Malaysia was the only developing country that featured as one of the top 10 national contributors to AIS research with China and Indonesia being the only emerging economies, also only 159 authors contribute to the 727 publications on AIS research, double authored publications had the highest number of publication as against others, only 5 of the top 10 outlets of AIS research were core accounting outlets, asides the obvious keywords of accounting information system, information system keywords such as Internal Controls, Auditing, Regulatory Compliance, Management Control were the most dominant.

Similarly, an assessment of the Ghana Integrated Financial Management Information System (GIFMIS) implementation was conducted by Duffour (2020). The study used a hybrid methodology and research design. According to the findings, the GIFMIS system's installation

in Ghana's public sector financial management system is a local initiative that fosters a sense of ownership and acts as a catalyst to encourage sufficient efforts toward the program's successful execution. A stable political governance system, the role of politics, and experience from the implementation of prior public sector financial management reform programs have all been crucial to its success. The public, who are important stakeholders, have been "closed off" from taking part in the implementation process, nevertheless.

Still in the context of financial management system, the study used a survey research approach, and regression and descriptive statistics were used to evaluate the data. The results demonstrate that the use of GIFMIS has been successful in keeping costs under control through the monitoring of budgetary and payment controls as well as the efficiency, transparency, and accountability of financial management. The study also demonstrates that the main obstacles to using GIFMIS are network outages and the absence of a training plan. The study also demonstrates that the main obstacles to using GIFMIS are network outages and the absence of a training plan. The study also demonstrates that the main obstacles to using GIFMIS are network outages and the absence of a training plan.

Considering the empirical studies in Nigeria, Onukelobi et al., (2019) examined the effects of financial management reforms on financial corruption in Nigeria public sector. The result of the data was subjected to various statistical tests, including descriptive statistics, correlation analysis, the Jargua-Bera normalcy test, and the auto correlation test, as part of a survey study design. The research employed Ordinary Least Square (OLS) regression analysis to examine the data. When examined as independent variables, the study concludes that Treasury Single Account (TSA) and International Public Sector Accounting Standards (IPSAS) have a favorable and statistically significant impact on reducing financial corruption. When examined as stand-alone variables, the Government Integrated Financial Management Information System (GIFMIS) and the Integrated Payroll and Personnel Information System (IPPIS) were found to have a negligible negative impact on financial corruption in Nigeria's public sector and a negligible positive impact.

In the light of Northern region of Nigeria Taiwo et al., (2020) investigated the impact of public financial management reforms on expenditure control in federal tertiary institutions in Adamawa State. The study employed survey research design and adopted simple percentage, standard deviation and chi-square as analytical tools. The result reveals that Government Integrated Financial Management Information System and Treasury Single Account were

adequately implemented and both have significantly impacted on expenditure control in the Federal tertiary institutions in the state.

Ibrahim et al., (2022) evaluated the influence of integrated financial management information system (IFMIS) on the performance of government entities in Nigeria. Partial Least Square and Thematic/NVIVO analytical techniques were used in the study, which used a survey research methodology. The study concludes that, despite a number of obstacles, IFMIS has a major impact on the financial and non-financial performance of government organizations.

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 used descriptive and contextual methods and a survey research design. According to the findings, the government's goal was clear when the Integrated Payroll and Personnel Information System (IPPIS) was first implemented in Nigeria. However, the drawbacks of IPPIS greatly exceed its benefits, as it is an attempt to impede employee welfare, which is essentially bad governance.

Summary and Gap Identified in the Literature

The examination of existing literature in this research focuses on matters pertinent to the study's objectives. A comprehensive review encompassing conceptual, theoretical, and methodological, aspects has been conducted, specifically concentrating on the digitalization of government accounting practices and institutional quality within the defined scope. The outcome of the thorough review of prior empirical researches reveals discernible knowledge gaps that remain unaddressed.

Also, most empirical studies on accountability majorly focused on the social and administrative and very few of financial aspect of accountability (Taiwoet al., 2020; Bassey et al., 2023; Chandra & Chowdhury, 2023; Salisu & Ibeogu, 2022; Tapang & Ibiam, 2019). This study thus found a need to address the issue of accountability from a near perspective, that is, financial accountability. Furthermore, to the best of researcher's knowledge, there is dearth of studies that explained financial, accountability in government entities in Nigeria via the interaction of digitalized tax administration practice (e-tax), digitalized treasury management practice (TSA), financial management information system (GIFMIS), and digitalized personnel payroll service (IPPIS) and institutional quality.

More so, studies on digitalization of government operations through e-tax, IPPIS, GIFMIS and TSA have mostly been channeled towards service delivery and combating corruption [(Amaefule & Iheduru(2014); Chidi et al., (2022); Ike et al., (2023); Kaoje,(2020); Njoku

(2022); Nwozor et al., (2022); Temitope et al., (2023)]. It is against this backdrop that this study intends to fill this gap.

3.0 Methodology

This 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. The study's population comprises 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. This study adopts the Krejcie and Morgan (1970) formula and table to determine the sample size, thus, the sample of this study is two hundred and thirty three staffs of auditor general of the population (233). The study used a survey design, with main data collected via research questionnaire. As explained by Saunders and Lewis (2009) and Syed et al, (2016), this strategy allows for an investigative approach, collecting pertinent information from selected individuals. The source of data, therefore, is directly from the field (primary), as the opinion of the participants have not been recorded over time neither could it be gotten from any databases. Thus, accountability model developed by Ezenwaka, Obi, and Okudo (2022), which examined the effect of the Treasury Single Account (TSA) on accountability in Nigeria's public sector, was adapted and modified for the present study. The original linear model was specified as follows:

$$ACC_i = \beta_0 + \beta_1 TSA_i + \mu_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.3.0$$

Where:

- ACC_i = Accountability in the Nigerian public sector
- β_0 = Constant (intercept)
- TSA_i = Treasury Single Account (independent variable)
- β_1 = Coefficient of the TSA
- μ_i = Error term

In other to suit the objective of this study, the study therefore adopted and modified as follows;

$$FACC_i = \beta_{0i} + \beta_1\,INVM_i + \beta_2\,ASSM_i + \beta_3\,BUP_i + \mu_i \ldots \ldots\ldots\ldots.3.1$$

Where;

Dependent Variables:

FACC = Financial Accountability of MDAs

Independent Variables:

INVM = Inventory Management

ASSM = Asset Management

BUP = Budgetary Practices

However, the investigation in this study utilized Ordered Logistic Regression, Ordinary Least Square (OLS) and Partial Least Square-based Structural Equation Modeling (PLS-SEM) as inferential statistical methods. Research questions 1 to 5 was addressed using Ordered Logistic Regression, and Ordinary Least Square (OLS) while Structural Equation Modeling (PLS-SEM) was employed to examine the moderating effects in relation to research question 6. The subsequent sections provide an in-depth analysis of these three approaches.

Table 3.1:   Measurement of Operational Variables

Variables	Constructs	Operational Definitions	Measurement Scale	Data Type
Accountability	Financial	Responses to be given in Likert Scale of 1-5 to evaluate accountability of government entities in Nigeria	Ordinal Scale	Primary (Quantitative)
Financial management information system practices	i. Inventory Management ii. Assets Management iii. Budgetary Practices	Responses to be given in Likert Scale of 1-5 to evaluate the effect of financial management information system practices on accountability of government entities in Nigeria	Ordinal Scale	Primary (Quantitative)

Source: Author's Compilation, 2024

Table 3.2:   Statistical Test of Hypotheses

Hypothesis Statement	Types of Analysis	Decision Rule & Interpretation
H_{01}: Financial Management information system practices have no significant impact on the accountability of MDAs in Nigeria.	Ordinary Least Squares Regression	Reject H_{01}: If p-value is < 0.05. Fail to reject H_{01} if p-value is > 0.05 $Y = \beta_0 + \beta_3 X_3 + \mathcal{E}$

Source: Author's Compilation, 2024

4. Data Presentation, Analysis and Discussion of Findings

4.1 Data Descriptive Statistics

In this section, the result of the analysis exercises was explored based on the responses provided by the participants. The discussion follows the predefined structure of the research instruments. It begins with descriptive analysis of the socio-demographic characteristics of the government officials, who gave their consent to participant in the field survey.

Table 4.1: Accountability of Ministries, Department, and Agencies (MDAs) in Nigeria

Items	Mean	Standard deviation	Residual variance	Intraclass correlation	Cronbach's alpha	Convergent Validity
FACC 3	3.80	1.33	1.77			

Table 4.1 presents the summary statistics of the items in each category of financial accountability (FACC). It also presents the reliability and validity of each of this category using the inter-class correlation, Cronbach Alpha, and convergent validity. In total, 12 items were used to measure accountability in Table 4.1. This was further broken down into financial accountability (4 items). With regards to financial accountability, the item with the highest mean score is FACC3 (M=3.80, S.D=1.33). All average values are above the midpoint of 3, which implies that most participants agree with the associated questions. The Cronbach Alpha of 0.870 and convergent validity of 0.869 indicates that the questions are good measure of financial accountability of ministries, departments and agencies in Nigeria.

Table 4.2: Digitalized Financial Management Practices

Items	Mean	Standard deviation	Residual variance	Intraclass correlation	Cronbach's alpha	Convergent Validity
Inventory Management						
INVM 1	3.59	1.041	1.083	0.354	0.622	0.627
INVM 2	3.44	1.190	1.416			
INVM 3	3.40	1.159	1.343			
Asset Management						
ASSM 1	3.59	.787	.620	0.458	0.761	0.757

ASSM 2	3.83	1.081	1.168			
ASSM 3	3.57	1.061	1.125			
Budgetary Practices						
BUP 1	3.31	1.181	1.395	0.578	0.836	0.839
BUP 2	3.61	1.034	1.070			
BUP3	3.34	1.201	1.442			

Table 4.2 presents the summary statistics of the items in each category of inventory management (INVM), asset management (ASSM), budgetary practices (BUP) and financial reporting and transparency (FRT). It also presents the reliability and validity of each of this category using the inter-class correlation, Cronbach Alpha, and convergent validity. In total, 15 items were used to measure digitalized financial management practices in Table 4.2. This was further broken down into inventory management (3 items), asset management (3 items) and budgetary practices (3 items).

With regards to inventory management, the item with the highest mean score is INVM1 (M = 3.59, S.D= 1.041), which was followed by INVM2 (M=3.44, S.D=1.190), and INVM3 (M=3.40, S.D=1.159),. All average values are above the midpoint of 3, which implies that most participants agree with the associated questions. The Cronbach Alpha of 0.622 and convergent validity of 0.627 indicates that the questions are good measure of inventory management within ministries, departments, and agencies in Nigeria.

With respect to asset management, the item with the highest mean score is ASSM2 (M=3.83, S.D=1.081), which was followed by ASSM1 (M=3.59, S.D=0.787). This was followed by ASSM3 (M=3.57, S.D=1.061). Given that all the mean values are greater than the midpoint of 3, majority of the respondents agreed with the assertions measuring asset management. The Cronbach Alpha of 0.761 and convergent validity value of 0.757 are indicators revealing that the questions are good measure of asset management within ministries department and agencies.

In terms of budgetary practices, the item with the highest mean score is BUP2 (M=3.61, S.D=1.034). This was followed by BUP3 (M=3.34, S.D=1.201), BUP1 (M=3.31, S.D=1.181). All the average values for the constructs of budgetary practices are greater than 3, indicating that the most of the participants agreed with the questions measuring budgetary practices. The Cronbach Alpha has a value of 0.836 and convergent validity of 0.839 shows that the items measuring budgetary practices are highly reliable.

4.3 Preliminary Analyses

Within this segment, the initial outcomes of the analysis undertaken in this study are disclosed. This comprehensive analysis encompassed a series of vital steps, commencing with normality tests, and correlation analysis. Moreover, principal components analysis was executed to ascertain the fitting index, paving the way for ordered logistic regression to delve into the effects of digital accounting practices on the components of the dependent variable which are financial, social, and administrative accountability. These analytical approaches were carefully executed as preliminary to the core OLS regression analysis and structural equation estimation. These latter techniques were harnessed to effectively address and fulfill the research aims.

Normality Test and Correlation Analysis of the Variables

The analysis pertaining to the normality of variables utilized within the models of this study is elaborated upon in this section. To ascertain normality, the study employed the examination of Skewness and Kurtosis. This comprehensive approach was imperative to ensure the data's conformity to the prerequisites and assumptions of multivariate regression analysis, as advocated by Hair et al. (2010). Notably, the evaluation of joint skewness and kurtosis was undertaken, as these parameters stand as more insightful measures for scrutinizing the distribution of individual variables.

The variables included in the normality test have been transformed based on the responses associated with each. Each respondent responses with respect to each construct were summed up and a weighted mean average was carried out. From this point, the analysis was based on calculated variables.

Table 4.3: Skewness and Kurtosis Joint Normality Test

Normality Test	Skewness	Kurtosis
Variables	Statistic	Statistic
Financial Accountability	0.735	-0.702
Digitalized financial management practices	0.148	-1.042

Table 4.3 presents the skewness and kurtosis statistic score. With respect to the Skewness, all statistic values fall between +3 and -3, which is the accepted range for a variable to be normally distributed (Asika, 1991). That implies that all the variables are normally distributed.

Multicollinearity Test

As outlined by Hair et al. (2006), the existence of multicollinearity has the potential to introduce distorted coefficients and undermine the statistical significance of a variable. In situations where a pronounced correlation exists among explanatory variables, achieving accurate estimations of regression coefficients can prove to be challenging (Johnston, Jones, & Marley, 2018).

In light of this, the present study conducted a pairwise correlation analysis prior to model estimation. This analysis aimed to explore the bivariate relationships between the variables in the models, as depicted in Table 4.3

Table 4.3: **Pairwise Correlation Matrix**

Variables	FACC	SACC	ADACC	DTAP	DTMP	DFMP	DPMP	IQ
FACC	1							
DFMP	-0.306**	-0247**	-0.309					

Table 4.3 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).

Regression Analysis Adopting Ordered Logistic Regression

The decision to adopt ordered logistic regression was informed by the ranking order of the responses provided by the participants for accountability constructs, which range Likert scale format (Extremely low to Extremely High). Before the application of the ordered logistic regression, the study employs factor analysis to reduce a large number of observed variables into a smaller set of underlying factors. This simplifies data interpretation and analysis by identifying the most important dimensions or constructs to proxy as financial accountability, social accountability, and administrative accountability.

Effect of Digitalized Financial Management Practices on Accountability among Ministries, Departments, and Agencies (MDAs) in Nigeria

This sub-section presents the ordered logistic regression results of the effect of Digitalized Financial Management Practices on financial accountability of ministries, departments, and agencies in Nigeria. This is presented in Table 4.4

Table 4.4:   Ordered Logistic Regression Result for Financial Accountability

Variables	Coefficient	Std. Err.	T	p-value
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

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)

Given the above, inventory management has negative influence financial accountability of ministries, departments and agencies in Nigeria. On the other hand, asset management, budgetary practices have positive influence on financial accountability of ministries, departments and agencies in Nigeria.

4.5 Summary of Test of Hypotheses

Table 4.5 provides a snapshot summary of the OLS regression model results for the test of first, second, third, hypothesis relating to the effect of inventory management, asset management and budget practices.

H_{01} stated that digitalized inventory management has no significant effect on the accountability of ministries, departments, and agencies in Nigeria. The test revealed that the null hypothesis H_{01} was rejected.

H_{02} stated that a digitalized asset management practice has no significant effect on the accountability of ministries, departments, and agencies in Nigeria. The test revealed that the null hypothesis H_{02} was rejected.

Accordingly, H_{03} stated that digitalized budgetary practice has no significant effect on the accountability of ministries, departments, and agencies in Nigeria. The test revealed that the null hypothesis H_{03} was rejected.

Tables 4.5 Summary of Test of Hypotheses on the effect of Digital Accounting practice on Accountability of Ministries, Departments, and Agencies in Nigeria.

Var	Hypothesis	Result/Sign Obtained	Decision/Support for Hypothesis
H_{01}	Digitalized inventory management has no significant effect on the accountability of ministries, departments, and agencies in Nigeria.	Significant (-ve)	Accept
H_{02}	Digitalized asset management has no significant effect on the accountability of ministries, departments, and agencies in Nigeria.	Significant (+ve)	Reject
H_{03}	Digitalized budget practices have no significant effect on the accountability of ministries, departments, and agencies in Nigeria.	Significant (+ve)	Reject

Source: Author's Results, (2024)

4.6 Discussion of Findings

Given the first objective, digitalized financial management practices, inventory management emerges as a strong contributor to accountability, with a coefficient of 0.304 and a p-value of 0.000. The digitalization of inventory processes ensures that government assets are properly tracked and managed, reducing losses and discrepancies in public resources.

The second objective, automated systems for inventory management help eliminate manual errors, providing real-time updates on asset conditions and availability, which enhances transparency in the handling of government resources. This finding aligns with Ibrahim and Ezeani (2022), who demonstrated that digital inventory management systems improve asset tracking and reduce discrepancies in Nigerian MDAs. Nwachukwu et al. (2023) also emphasize the role of digital systems in minimizing losses and improving accuracy in inventory management.

Lastly, asset management, with a coefficient of 0.354 and a p-value of 0.000, also shows a significant positive effect on accountability. By digitizing the processes related to asset management, MDAs can maintain accurate records of government-owned properties and resources, ensuring that they are used efficiently and effectively. Digital asset management systems provide a clear audit trail and enhance the capacity for oversight, reducing opportunities for misuse or misappropriation of public assets. This leads to higher

accountability, as these systems make it easier to detect any discrepancies or inappropriate use of government resources. Ojo and Olowu (2021) support this finding, indicating that digital asset management improves oversight and reduces misuse of public resources in the Nigerian public sector.

5. Conclusion and Recommendation

The coefficient of digitalized inventory management is negative and statistically significant; leading to the conclusion that digitalized inventory management has no significant effect on accountability in ministries, departments, and agencies in Nigeria, which aligns with the study's expectation. On the other hand, digitalized asset management and digitalized budgetary practices have significant positive and statistically significant; leading to the conclusion that digitalized asset management and digitalized budgetary practices have significant effect on accountability in ministries, departments, and agencies in Nigeria, which aligns with the study's expectation.

In the light of this conclusion, the study therefore, recommends that 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. By prioritizing these areas, MDAs can improve financial transparency, reduce risks of fraud and mismanagement, and strengthen accountability mechanisms across all levels of government operations. Additionally, there should be further real-time integration of financial reporting systems through GIFMIS framework so as to enhance monitoring and oversight financial management process of MDAs in Nigeria.

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