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INTERNAL CONTROLS AND ACCOUNTING INFORMATION SYSTEMS OF SELECTED SMALL AND MEDIUM-SCALE ENTERPRISES IN LAGOS, NIGERIA

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ABSTRACT
The study focused on the impact of internal controls of Small and medium enterprises in Lagos state on its Accounting Information system. Specifically, the study examined the effect of Control Environment on the accounting information system of small and medium scale enterprise in Lagos State, ascertained how Risk Assessment affects the accounting information system of small and medium scale enterprise in Lagos State, and determined the effect of Information and Communication System on the accounting information system of small and medium scale enterprise in Lagos State. Using the survey research design, the study sampled 350 CEOs, Managers of SMEs and internal control Specialist in Lagos State. Using the Ordinary least square statistical technique, the study found out that control environment has a significant and positive impact on Accounting Information System (p-value 0.0000; coefficient 3.1976). It was discovered that risk assessment have a significant and positive impact on Accounting Information System (p-value 0.0000; coefficient 56.8588). The study also revealed that that Information and Communication System does not have a statistically discernible impact on Accounting Information System (p-value 0.6661; coefficient 1.0407) within the sample period. The study therefore concludes that the control environment, risk assessment, and control activities significantly enhance the effectiveness of the accounting information system in SMEs, while the information and communication system does not have a statistically significant impact. Based on these findings, it was recommended that SMEs strengthen their control environment by enforcing ethical leadership, regulatory compliance, and organizational discipline. Additionally, businesses should enhance risk assessment strategies to mitigate financial uncertainties and improve decision-making. Control activities should be rigorously implemented to ensure data accuracy and fraud prevention.

Key words: *Accounting Information system, Control Environment, Information and Communication System, Internal Control Risk Assessment.*

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INTRODUCTION

In today's corporate world, the importance of organised and trustworthy financial data management systems cannot be stressed. Businesses in Nigeria and throughout the world, especially small and medium-sized firms (SMEs), depend on systems that make it easier to gather, process, and report financial data (Yadiati et al., 2024). These systems are critical for making decisions, ensuring regulatory compliance, and communicating with stakeholders

(Cachay et al., 2022). For SMEs, which contribute considerably to economic development and jobs, preserving the dependability and integrity of financial data is crucial for survival and competitiveness in an ever-changing market (Anggraeni et al., 2024). The development of digital transformation and globalisation has enhanced the necessity for these systems. The rising complexity of business operations, coupled with the challenges of fraud, financial mismanagement, and operational inefficiencies, has prompted frameworks to secure organisational resources while also insuring operational efficiency (Al-Hattami & Kabra, 2024). These worries have been heightened by high-profile incidents of financial scandals and systematic flaws in companies of all sorts. Such incidents have underlined the requirement for approaches to avoid, recognise, and react to abnormalities while sticking to established regulations (Iska, 2024). In response to these difficulties, comprehensive actions were devised to encourage accountability, limit risks, and strengthen financial system stability.

Effective techniques for safeguarding corporate operations are vital to preserving the integrity of financial processes and ensuring that data-driven choices are based on accurate and timely information (Long, 2024). These solutions try to reduce problems like mistakes, fraud, and inefficiency, which are especially frequent under less organised organisation situations. The advantages to SMEs are substantial, as solid systems give the basis for development, resilience, and long-term competitiveness (Alabdullah & Maryanti, 2021). Ensuring the efficacy of these systems solves crucial concerns relating to transparency, accountability, and operational sustainability. A robust company framework's essential component is typically the source of its strength. These structures define an organization's culture of honesty, accountability, and compliance. Businesses that cultivate a disciplined workplace are better suited to maintain operational regularity and avoid mismanagement (Yusufu, 2021). For SMEs in Nigeria, where resource restrictions and informal practices are common, having a stable foundation is crucial for long-term success. This vital technique not only boosts the quality of financial reporting but also promotes stakeholder trust and confidence (Adegboyegun et al., 2020). Assessing possible dangers inside an organisation is a proactive method that greatly helps to sustain operational efficiency. Businesses that understand risks might build ways to reduce possible disruptions (Aladejebi, 2017). Risk assessment and prioritisation are critical for SMEs to create resilience in the face of market volatility and operational issues. This structured method promises that businesses be adaptive and responsive to new difficulties while assuring process correctness and dependability.

Another key component for good data management and decision-making is easy process and system integration (Cachay et al., 2022). Businesses may eliminate redundancies and boost operational efficiency by simplifying communication and ensuring that information flows seamlessly between departments. Implementing full solutions that enable connection and cooperation helps SMEs by improving resource utilisation and boosting financial data accuracy. This interconnection is especially vital in today's digital economy, when rapid access to information may make or break a corporation (Ogbomo et al., 2022). Operational strategies that stress standardised processes and proactive efforts are vital to guaranteeing the quality of firm operations. Businesses may lower their risk of mistakes and fraud by implementing clear standards and monitoring compliance. These solutions aid SMEs by boosting operational predictability and reliability (Galani et al., 2024). This not only helps with day-to-day operations, but also aids long-term planning and development initiatives.

Regular monitoring and performance evaluation are important to sustain the efficacy of any system. Businesses may assure their flexibility and efficiency in a fast-changing environment by continually analysing and updating their processes (Yusufu, 2021). SMEs in Nigeria, which encounter resource limits and market volatility, benefit substantially from continual monitoring measures. This method permits them to recognise rising issues and repair them before they become more serious, assuring long-term operations and dependability. Despite the usefulness of these systems, there are major challenges to assuring their success. In Nigeria and throughout the world, difficulties like as insufficient training, resource restrictions, and technology shortcomings hamper firms' capacity to entirely optimise their operations (Galani et al., 2024). For instance, SMEs can struggle to absorb contemporary technologies owing to a lack of money and technical expertise. These concerns might result in erroneous financial reporting, poorer stakeholder confidence, and diminished operational efficiency (Al-Hattami & Kabra, 2024). One significant example is the inability of some firms to satisfy regulatory duties, resulting in brand harm and financial losses. Addressing these concerns is crucial for boosting SMEs' resilience and competitiveness in an increasingly demanding business environment.

Objectives

The broad objective of the study was to examine the impact of internal controls on the Accounting Information system of selected Small and Medium Enterprises in Lagos State. Specifically, the study:

1. examines the effect of Control Environment on the accounting information system of small and medium scale enterprise in Lagos State.
2. escertaines how Risk Assessment affects the accounting information system of small and medium scale enterprise in Lagos State.
3. determines the effect of Information and Communication System on the accounting information system of small and medium scale enterprise in Lagos State.
4. examines the effect of Control Activities on the accounting information system of small and medium scale enterprise in Lagos State.

LITERATURE REVIEW

Internal Control

Internal control refers to the techniques, rules, and processes that companies adopt to secure the accuracy of financial reporting, compliance with law, and operational efficiency. Zhang et al. (2024) indicate that good internal control systems are vital for risk minimization and financial information dependability. The authors underline that solid internal control measures make a substantial contribution to fraud prevention. Similarly, Adewale and Okoro (2023) state that in Nigeria, the adoption of technology into internal control systems has increased corporate governance transparency and accountability.

Control Environment

The control environment sets the tone for an organization and effects its personnel' control awareness. According to Carter and Lee (2024), the control environment is the cornerstone of a successful internal control system, and it incorporates features such as management philosophy, organizational structure, and ethical standards. They feel that a strong control environment supports responsibility and compliance. Johnson (2023) underlines the relevance of leadership in establishing the control environment, noting that ethical leadership increases employee behavior and adherence to controls.

Ho_1: Control Environment has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

Risk Assessment

Risk assessment entails identifying and analyzing possible hazards that may impede a business from fulfilling its goals. Smith et al. (2024) depict risk assessment as a dynamic process that demands ongoing monitoring and reacting to new dangers. They claim that organizations that do risk assessments on a regular basis are better prepared to manage operational and financial challenges. According to Bello and Ahmed (2023), including data analytics into risk assessment procedures has boosted organizations' capacity to forecast and confront new threats efficiently.

Ho_2 Risk Assessment has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

Information and Communication System

A good information and communication system is crucial for a successful internal control structure. According to Kim et al. (2024), these systems guarantee that vital information is detected, captured, and rapidly transmitted to the required persons. The authors underline the relevance of incorporating information technology into organizational processes in order to promote decision-making and accountability. Olatunji and Adeola (2023) illustrate how current information systems offer real-time communication, which is crucial for responding to issues as they occur.

$Ho_{3:}$ Information and Communication System has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

Control Activities

Control actions are policies and practices that are undertaken to handle recognized risks and satisfy company goals. Green and Taylor (2024) characterize control operations as actions done to guarantee that management directions are effectively carried out. These include authorizations, reconciliations, and performance assessments. The authors underline that technology improvements have automated various control procedures, consequently enhancing their efficiency and dependability. Similarly, Yusuf and Obi (2023) feel that focused control procedures may greatly minimize the possibility of financial misstatements.

$Ho_{4:}$ Control Activities has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

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Monitoring

Monitoring involves periodic reviews to verify that internal controls work as planned. Brown and Carter (2024) characterize monitoring as the ongoing inspection of control systems in order to find vulnerabilities and undertake remedial operations. They note that successful monitoring needs both automated technologies and human control. Ahmed (2023) adds that firms with excellent monitoring systems are better positioned to recognize and react to abnormalities, maintaining their assets and reputations.

Accounting Information System.

An accounting information system (AIS) is a framework that gathers, processes, and transmits financial data to better decision-making. Thompson and White (2024) define AIS as a vital component of internal controls that ensures the correctness and integrity of financial records. The authors underline that contemporary AIS employs new technologies such as blockchain to promote data security and transparency. Eze and Nwafor (2023) underline the usefulness of AIS in simplifying regulatory compliance, especially in businesses with heavy reporting obligations.

Theoretical Review

The research is based on agency theory. Jensen and Meckling established the notion in 1976. This theory focusses on the relationship between principals (owners) and agents (managers or workers) in an organisational structure. It is regarded that there is a contractual relationship in which the principal assigns responsibilities to the agent, who works on behalf of the principle. However, the theory emphasises serious conflicts of interest that may develop if agents set their personal interests above those of the principals, resulting in difficulties such as information asymmetry and moral hazards (Ross, 1973; Mitnick, 1973). The technique is especially applicable to the analysis of small and medium-sized enterprises' internal control systems. Internal control mechanisms, as detailed in Agency Theory, are strategies for aligning agents' interests with those of principals and reducing hazards connected with information asymmetry. Internal controls in accounting information systems (AIS) guarantee that financial reporting is trustworthy, accurate, and transparent, lowering the risk of fraud, mismanagement, and inefficiencies. AIS combines internal controls to guarantee that financial data is handled responsibly, offering stakeholders faith that management's actions are aligned with the owners' purposes (Jensen & Meckling, 1976).

The adoption of Agency Theory is vital in the Nigerian SME sector, given its relevance to the economy and susceptibility to inefficiencies induced by insufficient internal controls. AIS in SMEs must be created to combine strong internal control mechanisms that lessen the agency issue. By reducing the risk of agents acting against the interests of principals, the theory underlines the importance of establishing and implementing regulations that promote accountability, transparency, and the integrity of financial institutions. This is especially crucial in an environment where limited resources exacerbate the effect of fraud and operational inefficiencies. Several recent research utilised Agency Theory to examine internal controls and AIS in SMEs. For example, Adeleke et al. (2023) studied the benefits of internal controls on boosting AIS effectiveness in Nigerian SMEs and found that successfully implemented controls considerably decreased the risk of fraud and financial misstatements. Similarly, Eze and Okoye (2022) employed Agency Theory to study the alignment of management actions and owners' objectives in Nigerian SMEs, suggesting that effective AIS backed up by internal controls promotes improved decision-making and financial discipline.

Empirical Review

Yadiati et al. (2024) analyse whether the usage of the sales accounting information system, cash receipts, and payroll is connected with the internal control system. This study employs descriptive research. The data employed in this research is qualitative. This research utilises secondary data and data collection methodologies such as interviews, documentation, and observation. The research results found that the internal control system was operating effectively because the company supports the entity's ethical values and conduct, which are utilised as components of the code of ethics; management is also disciplined during working hours.

Al-Hattami and Kabra (2024) evaluated the influence of AIS success on MCE among SMEs in Yemen, a developing country, where research and expertise are weak. A questionnaire was utilised to obtain data from 315 SME owners and managers. SmartPLS 3 software was utilised for data analysis. The data demonstrated a good correlation between AIS success and MCE. Specifically, the data indicated that AIS information quality, system quality, and use all have a positive influence on MCE; information and system quality are significant drivers of AIS use and satisfaction; and user happiness benefits AIS utilisation. Interestingly, the quality of service was demonstrated to be insignificant in the context of AIS. Furthermore, user pleasure had no meaningful effect on MCE.

Anggraeni et al. (2024) analyse the influence of internal controls and accounting information systems. The research employed a quantitative strategy, namely a descriptive approach and verification techniques comprising correlation coefficient, simple linear regression, and coefficient of determination. The investigation covered a population of 30 persons, and the samples acquired represented the entire town. The research findings on a consumer goods distribution business in Bandung reveal that the company's cash sales accounting information system (X) is performing effectively, with a score of 3.25. The internal control over cash sales (Y) is also found to be totally adequate, with a score of 3.19. The findings of this study demonstrate a considerable association (correlation coefficient of 0.862) between the Cash Sales Accounting Information System and Cash Sales Internal Control. The Cash Sales Accounting Information System accounts for 74.3% of the variation in Cash Sales Internal Control (R squared contribution). The remaining 25.7% is attributed to undiscovered factors such as business policy.

Iska (2024) performs a literature analysis to investigate the components that effect the quality of financial reports, including human resource competency, internal control systems, and the usage of accounting information systems. The purpose of this study is to establish a hypothesis regarding the influence of variables to be employed in future research. The results of this literature review research reveal that human resource competency affects the quality of financial reports, the internal control system influences the quality of financial reports, and the usage of accounting information systems effects the quality of financial reports. This research illustrates that adjustments in these three areas work together to increase the quality of financial reporting, thereby improving the company's success and sustainability.

Oyedokun and Muhammad (2023) assessed the financial performance of SMEs in Kebbi State, Nigeria, to identify the advantages of creating an efficient internal control system. The study was done using a descriptive survey approach. CEOs, managers, and internal control units of Kebbi State SMEs anticipated that 2,200 people would be employed there by 2022. 338 study participants were recruited using a totally random manner. The five hypotheses were examined using a questionnaire prepared by the researchers and the Pearson Product Moment Correlation Coefficient Analysis, with a two-tailed test of significance at the P0.01 level. According to the findings, SMEs in Kebbi State, Nigeria, may save money by adopting several internal control components. The economic performance of small and medium-sized companies (SMEs) in Kebbi State, Nigeria, is impacted by a variety of factors, including the availability or absence of important internal control components.

Yusufu (2021) investigated 115 enterprises in the Nigerian state of Kogi, assessing their financial performance and management. This study's results suggest that small and medium-sized enterprises benefit from easy access to funding. According to one study, without foreign funding, Nigerian SMEs would not have grown. The study's emphasis on financial management elements assisted small and medium-sized firms greatly, according to the results. According to the report, SMEs require the help of professional portfolio managers when choosing assets. A long-term strategic plan is crucial for small and medium-sized enterprises (SMEs) to boost their bottom line.

Alabdullah and Maryanti (2021) did a research of accounting, management, and finance studies on internal control procedures. In the context of this research, our review focusses on particularly perplexing and important issues and topics, such as the homogeneity in the relationships between internal control mechanisms and other issues of interest to accounting, management, and finance, as well as scholars and academics, and proposes new relationships that must be addressed. We also highlight the importance of assessing internal control systems, especially. Understanding the different components of internal control systems is both important and crucial. Several theories are essential, for example, to demonstrate whether diverse internal control mechanisms (ICM) complement or replace one another. While interdisciplinary research is crucial for building better theories, which is always a tough undertaking, it has the ability to increase present literature and knowledge of internal control processes.

Adegboyegun et al. (2020) evaluated internal controls and corporate performance among SMEs in Ondo State, Nigeria. The findings show that SMEs in the state of Ondo could anticipate enhanced operational performance even if only portion of the components of an effective internal control system are applied. However, it was proven that the converse was true: the regulated environment and activities boosted the chance of this happening. As a consequence, SMEs must safeguard and optimise the advantages given by their control environment and control activities if they wish to attain optimum operational performance. Because each company's activities are unique, risk assessment, information and communication, and operations monitoring must all be handled in a consistent way.

Aladejebi (2017) studied how the top executives of Nigerian small and medium-sized companies (SMEs) increased internal control. A thematic analysis of the interview data indicated five main themes: clear demarcation of tasks, an emphasis on process, rules, and

procedures, the significance of people, education, and experience, the usefulness of technology, worker autonomy, and management commitment. The outcomes of this research reveal that SME managers in Nigeria utilise similar techniques to strengthen their firms' internal control systems. Internal control was reinforced by everyone's fastidious adherence to work assignment rules and procedures. If SMEs wish to strengthen their internal control systems, their owners and executives must have outstanding management abilities.

Gaps in Literature

Several studies have looked at internal controls and accounting information systems in both established and emerging economies. However, despite the present findings, a large gap still persists. Most research concentrate on particular places or nations, like Yemen (Al-Hattami & Kabra, 2024), Nigeria (Oyedokun & Muhammad, 2023; Adegboyegun et al., 2020; Aladejebi, 2017), and Indonesia (Anggraeni et al., 2024; Iska, 2024). However, there has been insufficient examination on the effect of internal control systems on the accounting information systems (AIS) of SMEs in Lagos, Nigeria, an important economic centre with specific operating aspects. Furthermore, most past research focus on general SMEs (Oyedokun & Muhammad, 2023; Yusufu, 2021) or specialist industries, such as consumer products (Anggraeni et al., 2024). Given Lagos' numerous economic sectors, a sectoral study of SMEs would be beneficial.

Alabdullah and Maryanti's (2021) work underscores the significance of multidisciplinary research into the complementarities and substitutability of internal control systems. However, no research has particularly studied how internal control systems interact with AIS components, resulting in a gap in the accounting and control literature. Furthermore, research by Anggraeni et al. (2024) and Adegboyegun et al. (2020) concentrate on various internal control components, such as cash sales or control procedures. There is a gap in knowing the combined influence of the five internal control components (control environment, risk assessment, control actions, information and communication, and monitoring) on AIS effectiveness. While Yusufu (2021) and Aladejebi (2017) emphasise financial management and managerial abilities in Nigerian SMEs, little focus is devoted to how these contextual variables in Lagos impact the integration of internal controls with AIS. Existing research, such as Oyedokun and Muhammad (2023), relates internal control systems to financial success, but others, such as Yadiati et al. (2024), assess ethical behaviour and compliance. However, minimal studies have studied how internal controls increase the operational efficiency of AIS inside SMEs, specifically in Lagos. In order to address the inadequacies,

the research analyses the influence of internal control on accounting information systems in SMEs.

Conceptual Framework

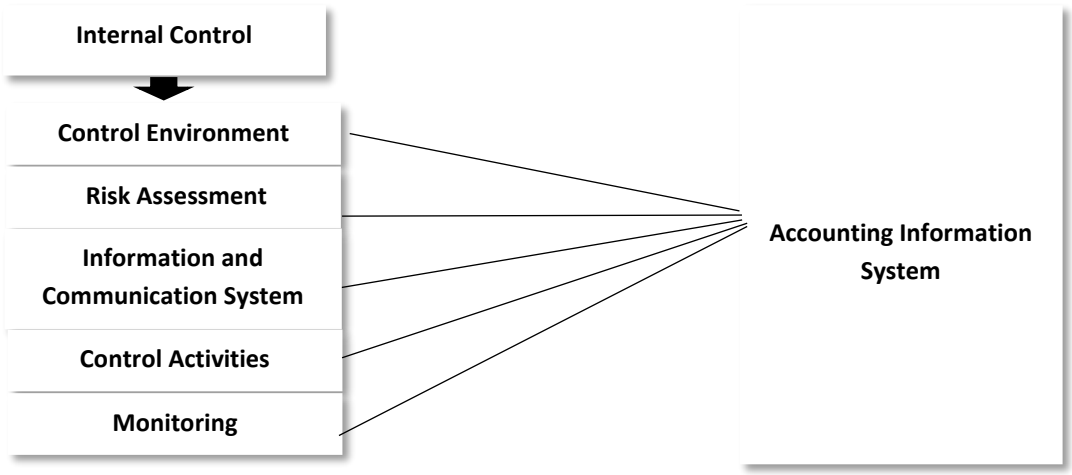


Figure 1 Conceptual Framework showing the interaction between internal control and accounting information system

Source: Author's Design, 2024

MATERIAL AND METHODS

The study employed a survey research design where a questionnaire was administered to CEOs, managers and internal control specialist of SMEs. The population of the study comprises of 2400 CEOs, managers of SMEs and internal control specialist in Lagos State. The Taro Yamane was used to determine the sample size of 350. The study adopted a simple random sampling technique. The data obtained was analysed using both descriptive and inferential statistics.

The model specification was adopted from Maec (1968). The model was modified to meet the specific objectives of the study as recently used by (Ogbonna et al., 2020)

$AIS = f(INC)$……Eqn 1.

$AIS = f(CE, RA, ICS, CA, MNT)$ ……Eqn 2.)

$AIS = a + \beta_1 CE + \beta_2 RA + \beta_3 ICS + \beta_4 CA + \beta_4 MNT + \varepsilon$……Eqn 3.

Where: AIS= Accounting Information System

INC = Internal Control

CE= Control Environment

RA = Risk Assessment

ICS = Information and Communication System

CA= Control Activities

MNT= Monitoring

$\beta_1 - \beta_4$ = coefficient of independent variables

ε = error terms

RESULT AND DISCUSSIONS

Demographic Analysis

Table 1 shows that majority of the SME owners are male, representing 57% of the sample, while female owners make up 43%. There is a relatively balanced gender distribution with males being slightly more dominant. The largest age groups are 18-25 years and 36-45 years, each with 25% of the respondents. This suggests that a significant proportion of SME owners in Lagos State are young adults and middle-aged individuals. A smaller portion, 6%, are over the age of 50, indicating that the majority of SMEs are managed by younger generations.
Most SME owners have 16-20 years of experience (25%), followed closely by those with 11-15 years (23%). A significant proportion of respondents have at least a decade of experience in their business ventures, suggesting a relatively experienced group. Only a smaller proportion (7%) have been in business for over 30 years, which may indicate that younger entrepreneurs dominate the SME sector.

There is a near-even distribution among the departments, with Internal Audit (35%) and Accounts (34%) being the most common, followed by Risk Management (31%). This indicates that a large number of SME owners are involved in finance-related functions, with internal audit and accounting taking precedence over risk management

Table 1: Demographic Analysis

Demographic		**f**	**%**
GENDER	Male	200	57%
	Female	150	43%
	Total	**350**	**100%**
AGE	18-25 Years	89	25%
	26-35 Years	82	23%
	36-45 Years	89	25%
	46-50 Years	70	20%

	50 years above	20	6%
	Total	**350**	**100%**
EXPERIENCE	1-5 Years	70	20%
	6-10 Years	55	16%
	11-15 Years	80	23%
	16-20 Years	88	25%
	21- 30 Years	34	10%
	31- 35 Years	23	7%
	Total	**350**	**100%**
DEPARTMENT	Account	120	34%
	Internal Audit	122	35%
	Risk Management	108	31%
	Total	**350**	**100%**

Source: Researcher's computation (2025)

The study used Cronbach's Alpha and Average Variance Extracted (AVE) to test construct reliability and validity. The results in table 3 shows the Cronbach's Alpha above indicating reliability and an AVE indicating validity.

Table2. Validity and Reliability Test of Variables

Variables	Reliability	Average inter-item	No of items
Accounting Information System			
Cronbach Alpha	0.8007	.1778848	5
Kaiser-Meyer-Olkin (KMO)	0.956		5
Control Environment			
Cronbach Alpha	0.8067	.1000732	5
Kaiser-Meyer-Olkin (KMO)	0.902	-	5
Risk Assessment			
Cronbach Alpha	0.7781	.1358878	5
Kaiser-Meyer-Olkin (KMO)	0.708	-	
Information and Communication			5
System	0.9905	.0938396	5
Cronbach Alpha	0.840		5
Kaiser-Meyer-Olkin (KMO)			
Control Activities			5
Cronbach Alpha	0.7075	.0938396	5
Kaiser-Meyer-Olkin (KMO	0.904	-	5
	Co-efficient	covariance	

Source: Author's Computation (2025)

Pairwise Correlation

Table 2 shows that there is the strong positive correlation between AIS and RA (0.7646, p = 0.0000). This suggests that the presence of a well-functioning Accounting Information System significantly enhances the Risk Assessment process. SMEs that have efficient AIS are better equipped to identify, analyse, and respond to risks effectively. Since risk assessment is a critical component of internal control, this relationship underscores the importance of maintaining reliable financial systems to ensure proactive risk management.

Similarly, AIS also exhibits a moderate positive correlation with Control Activities (CA) (0.5784, p = 0.0000). This indicates that businesses with a robust accounting system are more likely to implement strong control measures, such as authorization procedures, reconciliations, and performance reviews. Since control activities serve as a mechanism to ensure that business operations run smoothly and in compliance with regulations, the presence of AIS appears to reinforce these processes.

Control Environment (CE) also plays a crucial role in influencing both AIS (0.5394, p = 0.0000) and CA (0.4502, p = 0.0025). This suggests that a well-established control environment—comprising ethical leadership, organizational structure, and policies—creates a foundation for effective financial and operational controls. A strong control environment fosters a culture of accountability and transparency, which in turn enhances both accounting processes and daily control activities.

When considering Risk Assessment (RA) and Control Activities (CA), the correlation value of 0.6590 (p = 0.0000) signifies a strong connection between these two elements. This implies that businesses that prioritize risk assessment also implement better control activities. Essentially, firms that are proactive in identifying and mitigating risks are also more likely to establish procedures to prevent errors and fraud.

Information and Communication System (ICS) appears to have weaker relationships with other variables. While it does show a moderate correlation with CA (0.5725, p = 0.0414), its connection with other components like CE and RA is quite weak and statistically insignificant (p > 0.05). This suggests that while information flow is important, it may not directly drive other internal control components in the same way that accounting systems or risk assessment do.

Table 3 Correlation

Correlation Probability	AIS	CE	RA	ICS	CA
AIS	1.0000				
CE	0.5394	1.0000			
	0.0000	-----			
RA	0.7646	0.2641	1.0000		
	0.0000	0.0053	-----		
ICS	0.0725	0.0502	0.0426	1.0000	
	0.0014	0.6025	0.6585	-----	
CA	0.5784	0.4502	0.6590	0.5725	1.0000
	0.0000	0.0025	0.6200	0.0414	-----

Source: Author's Computation (2025)

Model Estimate of the effect of Internal Control on Accounting Information System in Small and Medium Scale Enterprise

The analysis uses an ordinary least squares method. The R-squared (Rw-squared) of 0.9569 indicates that approximately 95.69% of the variability in AIS is explained by the independent variables (CE, RA, ICS and CA). This suggests an excellent model fit. Adjusted R-squared also being 0.9569 confirms that the model maintains a high explanatory power even after adjusting for the number of predictors. The overall result shows that there is a positive and significant effect between internal control and accounting information system of small and medium enterprise in Nigeria. However, this is a broad submission.

Table 4. Ordinary Least Squares Regression

Variable	**Coefficient**	**Std. Error**	**z-Statistic**	**Prob.**
CE	3.1976	0.1723	18.5621	0.0000
RA	56.8588	2.9369	19.3600	0.0000
ICS	1.0407	2.4119	0.4315	0.6661
CA	4.7805	2.114	0.4233	0.0000
C	230.0633	20.1938	11.3928	0.0000
Rw-squared	0.9569	Adjust Rw-squared		0.9569
F- statistic	1886.6280	Prob (F-stat.)		0.0000
Akaike info criterion	219.2859	Schwarz criterion		232.1060
Deviance	2309.0040	Scale		3.2901

Source: Author's Computation (2025)

Test of Hypotheses

Hypothesis One

$Ho_{1:}$ Control Environment has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

As shown in Table 4, Control Environment (C) reported a coefficient: of 3.1976 and probability (p-value) of 0.0000. The positive coefficient indicates that control environment has a significant and positive impact on AIS. For each unit increase in control environment, AIS increases by approximately 3.20 units. This is highly significant ($p < 0.05$), suggesting that higher control environment can substantially increase a firm accounting information system.

This suggests that SMEs with strong ethical leadership, well-defined organizational structures, and strict adherence to internal policies tend to have more effective accounting information systems. These findings align with Olaoye and Adebayo (2022), who found that a well-established control environment enhances the effectiveness of AIS, reducing errors and fraudulent financial practices. Similarly, Adeyemi et al. (2023) demonstrated that a strong control environment fosters financial discipline and accountability, ultimately leading to a more reliable AIS.

Hypothesis Two

$Ho_{2:}$ Risk Assessment has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

As shown in Table 4, Risk Assessment (RA) reported a coefficient of 56.8588 and probability (p-value) of 0.0000. The positive coefficient suggests that risk assessment have a significant and positive impact on AIS. For each unit increase in risk assessment, AIS increases by approximately 56.86 units.

This result is consistent with Okafor and Eze (2022), who argued that firms with structured risk assessment processes have more transparent financial reporting, which is facilitated by AIS. Additionally, Mohammed and Lawal (2023) found that firms with proactive risk management practices are better at integrating technology-driven accounting systems, leading to enhanced financial decision-making.

Hypothesis Three

$Ho_{3:}$ Information and Communication System has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

As shown in Table 4, Information and Communication System (ICS) reported a coefficient 1.0407 and probability (p-value) of 0.6661. The coefficient for ICS is positive but not statistically significant ($p > 0.05$). This implies that ICS does not have a statistically discernible impact on AIS within the sample period. In this case the null hypothesis stating that no significant effect exit is accepted.

This suggests that while information flow is crucial for business operations, it does not directly enhance the effectiveness of AIS in SMEs. This finding is in line with Ibrahim and Yusuf (2023), who found that while information technology improves communication within firms, its impact on AIS is contingent on other factors such as employee training and management commitment. However, Nwachukwu et al. (2022) argued that an efficient communication system enhances data accuracy, which may indirectly improve AIS over the long term.

Hypothesis Four

$Ho_{4:}$ Control Activities has no significant effect on the accounting information system of small and medium scale enterprise in Nigeria.

As shown in Table 4, Control Activities (CA) reported a coefficient 4.7805 and probability (p-value) of 0.0000. The coefficient for CA is positive and statistically significant ($p <0.05$). This implies that CA have a statistically significant impact on AIS within the sample period. This implies that SMEs that implement robust control mechanisms such as authorization procedures, reconciliations, and performance evaluations tend to have more efficient AIS operations. These findings are supported by Akinyemi and Oladele (2023), who found that strong control activities enhance the accuracy and reliability of accounting data, reducing financial misstatements. Similarly, Olawale et al. (2022) argued that effective control activities serve as a safeguard against fraud, thereby improving AIS effectiveness.

CONCLUSION AND RECOMMENDATIONS

This study concludes that the control environment, risk assessment, and control activities significantly enhance the effectiveness of the accounting information system in SMEs, while the information and communication system does not have a statistically significant impact.

The findings suggest that a well-structured internal control system plays a crucial role in improving AIS efficiency, fostering financial transparency, and mitigating risks in SMEs. These results align with prior studies, reinforcing the importance of strong internal controls in financial management and decision-making.

Based on these findings, it is recommended that SMEs strengthen their control environment by enforcing ethical leadership, regulatory compliance, and organizational discipline. Additionally, businesses should enhance risk assessment strategies to mitigate financial uncertainties and improve decision-making. Control activities should be rigorously implemented to ensure data accuracy and fraud prevention. Finally, while information and communication systems did not show a significant direct impact, SMEs should integrate them more effectively with AIS to maximize their potential benefits in financial reporting and operational efficiency.

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