

Effect of Digital Accounting System Adoption on Financial Reporting Quality among Listed Manufacturing Companies in Nigeria

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Abstract

This study examined the effect of digital accounting practices on financial reporting quality of listed manufacturing companies in Nigeria between 2015 and 2025, with Financial Reporting Quality (FRQ) serving as the dependent variable. The specific objective was to assess how Digital Accounting System Adoption (DASA), Accounting Information System Integration (AIS), and Real-Time Financial Data Processing (RTFDP) influence FRQ. Using panel data obtained from five listed manufacturing companies and employing Panel Least Squares regression analysis, the study found that only one of the three digital accounting variables had a statistically significant effect on FRQ. Digital Accounting System Adoption ($\beta = 0.5966$, $p = 0.0000$) exhibited a significant positive effect, suggesting that greater adoption of digital accounting systems is associated with improved financial reporting quality. In contrast, Accounting Information System Integration ($\beta = -0.0949$, $p = 0.5658$) and Real-Time Financial Data Processing ($\beta = 0.2121$, $p = 0.1570$) showed statistically insignificant relationships with FRQ, indicating that these variables did not exert measurable effects on financial reporting quality during the study period. Descriptive statistics revealed moderate levels of digital accounting adoption, accounting information system integration, real-time financial data processing, and financial reporting quality, with some variations across the sampled firms and years. The findings suggest that effective adoption of digital accounting systems is particularly important for enhancing the accuracy, reliability, timeliness, and efficiency of financial reporting, while system integration and real-time processing may require stronger implementation mechanisms to produce significant reporting benefits. It is concluded that listed manufacturing companies should prioritize effective digital accounting system adoption, supported by adequate technological infrastructure, employee training, system security, and appropriate internal controls, to improve financial reporting quality and strengthen the credibility of corporate financial information.

Keywords: Digital Accounting Systems, Financial Reporting Quality, Accounting Information System Integration, Real-Time Financial Data Processing, Listed Manufacturing Companies

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Introduction

The increasing complexity of modern business operations has made the quality of financial information an important concern for companies, investors, regulators and other stakeholders. Financial reports are expected to provide information that faithfully reflects an entity's economic activities and supports informed economic decisions. The quality of reported earnings and accounting information can be evaluated through several dimensions, including persistence, predictability, value relevance, smoothness and accrual-based measures, although the usefulness of individual measures may differ across research settings (Ewert & Wagenhofer, 2015). In the Nigerian capital market, financial reporting quality is equally important because investors and other users depend substantially on published financial statements when assessing corporate performance, financial position and future prospects (Oyerogba, 2021).

The emergence of digital technologies has transformed the manner in which organisations collect, process, store and communicate accounting information. Digital accounting systems enable accounting transactions and financial information to be processed through computerised and interconnected technological platforms, thereby reducing dependence on purely manual procedures. The adoption of such technologies can potentially improve the speed, consistency and accessibility of accounting information while also supporting more efficient organisational decision making. Evidence from listed companies indicates that corporate digital transformation can enhance accounting information quality by improving information production and reducing information-related problems within organisations (Chen et al., 2024). Consequently, the adoption of digital accounting systems has become increasingly relevant to organisations seeking to strengthen the reliability and usefulness of their financial reporting.

In Nigeria, the adoption of computerised accounting information systems has become particularly relevant among listed manufacturing firms because these organisations process substantial volumes of financial and operational transactions. Manufacturing firms require accounting systems capable of capturing transactions, processing financial information and producing reports that support managerial and external decisions. Evidence from Nigerian listed manufacturing firms demonstrates that accounting software adoption can be investigated using secondary information extracted from firms' financial statements and annual reports. Nworie et al. (2023) examined 21 listed manufacturing firms using financial statements covering 2012 to 2021 and established that firm-level characteristics were associated with the level of computerised accounting information system adoption. This provides evidence that digital accounting practices can be investigated empirically using archival corporate information.

Accounting information system integration represents another important dimension of digital accounting because accounting activities increasingly need to interact with other organisational functions and information systems. An integrated accounting system can facilitate the movement of financial information across different business processes, reducing the need for repeated manual data entry and supporting consistency in the preparation of financial information. Digital transformation can facilitate continuous accounting by enabling organisations to collect, manage and analyse financial information through interconnected technological processes. Izzo et al. (2022) found that digital transformation facilitates continuous accounting and contributes to greater transparency and reliability of information. Therefore, accounting information system integration may have implications for the quality and reliability of financial reports produced by listed manufacturing companies.

Real-time financial data processing is also becoming increasingly important in contemporary accounting because organisations operate in environments where users require financial information within shorter periods. Traditional periodic accounting processes may create delays between the occurrence of transactions, their processing and the availability of financial information for decision making. Digital accounting technologies provide opportunities for more continuous processing and updating of accounting information. Through real-time processing, transactions can be captured and processed closer to the point at which they occur, potentially improving the timeliness and

availability of financial information. The movement toward continuous accounting illustrates how digital technologies are changing conventional accounting processes and creating opportunities for more timely and transparent financial information (Izzo et al., 2022).

The importance of digital accounting systems is ultimately connected to the quality of financial reporting produced by organisations. Financial reporting quality relates to the extent to which reported information possesses characteristics that make it useful to users, including relevance, faithful representation, comparability, understandability and timeliness. Evidence from Nigerian listed manufacturing companies indicates that the characteristics and operation of accounting information systems can influence the quality of financial reporting. Fasina and Olayemi (2023) examined listed manufacturing companies in Nigeria and found that system quality and user competence had significant positive effects on the quality of financial reporting. This suggests that the effectiveness of the systems through which accounting information is generated can have important implications for the usefulness of financial reports.

The Nigerian empirical literature further demonstrates that financial reporting quality remains an important area of investigation among listed companies, particularly within the manufacturing sector. Ekwueme and Aniefor (2019) investigated financial reporting quality among quoted manufacturing firms in Nigeria using longitudinal secondary data and measured reporting quality through residuals derived from the Modified Jones Model. Their findings showed significant relationships between several firm characteristics and financial reporting quality, demonstrating the feasibility of using published corporate information to empirically examine reporting quality. Similarly, Adekanmi et al. (2021) assessed financial reporting quality among listed non-financial firms in Nigeria using information obtained from annual reports and found that the overall level of reporting quality remained moderate during the period examined. These findings indicate that financial reporting quality continues to warrant empirical attention within the Nigerian corporate environment.

Furthermore, although previous studies have established relationships between accounting information systems, digital transformation and financial reporting quality, important gaps remain concerning the specific effect of digital accounting system adoption on the quality of financial reporting among listed manufacturing companies in Nigeria. Existing Nigerian studies have examined computerised accounting system adoption, accounting information system characteristics and financial reporting quality from different perspectives, while international evidence has increasingly considered digital transformation and continuous accounting. However, limited empirical attention has been directed specifically toward the combined influence of digital accounting system adoption, accounting information system integration and real-time financial data processing on financial reporting quality within Nigeria's listed manufacturing sector using secondary corporate data. This study therefore seeks to provide empirical evidence on this relationship using information obtainable from the annual reports and accounts of selected listed manufacturing companies in Nigeria.

Statement of the Problem

Digital accounting systems should ideally enable listed manufacturing companies to process accounting transactions efficiently, integrate financial information across different organisational functions, and provide timely and reliable information for the preparation of financial reports. Effective adoption of digital accounting systems should improve the accuracy, timeliness, consistency and reliability of financial information, thereby enhancing the quality of financial reporting. In a competitive and increasingly technology-driven business environment, listed manufacturing companies in Nigeria are expected to utilise appropriate digital accounting technologies to support the generation of high-quality financial reports that meet the information needs of investors, management, regulators and other stakeholders.

However, despite the increasing application of digital technologies in accounting, concerns remain regarding the quality of financial reporting among listed manufacturing companies in Nigeria. The adoption of digital accounting systems does not necessarily guarantee high-quality financial reports, particularly where accounting information systems are inadequately integrated, financial data are not processed in real time, or the technologies adopted are not effectively utilised. Differences in the extent of digital accounting system adoption among companies may therefore result in variations in the accuracy, timeliness and reliability of reported financial information. Furthermore, the extent to which digital accounting system adoption, accounting information system integration and real-time financial data processing influence financial reporting quality among listed manufacturing companies in Nigeria remains an empirical issue requiring further investigation using objective secondary data from corporate annual reports and accounts.

If these problems are not adequately resolved, listed manufacturing companies may continue to experience weaknesses in the quality of financial information presented to users of financial statements. Poor-quality financial reporting can impair investors' ability to make informed investment decisions, reduce the reliability of information available to management and other stakeholders, and potentially increase information asymmetry between companies and external users. Continued weaknesses may also undermine confidence in the financial statements of listed manufacturing companies and make effective monitoring by regulatory authorities more difficult. Therefore, there is a need to empirically determine the effects of digital accounting system adoption, accounting information system integration and real-time financial data processing on financial reporting quality among listed manufacturing companies in Nigeria.

Objectives of the Study

The main objective of this study is to examine the effect of digital accounting system adoption on financial reporting quality among listed manufacturing companies in Nigeria. The specific objectives are to:

- i. determine the effect of digital accounting system adoption on financial reporting quality among listed manufacturing companies in Nigeria.
- ii. examine the effect of accounting information system integration on financial reporting quality among listed manufacturing companies in Nigeria.
- iii. assess the effect of real-time financial data processing on financial reporting quality among listed manufacturing companies in Nigeria.

Research Questions

The study provided answers to the following research questions.

- i. What is the effect of digital accounting system adoption on financial reporting quality among listed manufacturing companies in Nigeria?
- ii. What is the effect of accounting information system integration on financial reporting quality among listed manufacturing companies in Nigeria?
- iii. What is the effect of real-time financial data processing on financial reporting quality among listed manufacturing companies in Nigeria?

Statement of Hypotheses

The following hypotheses in null form (H_0) guided this study

- i. H_{01} : Digital accounting system adoption has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

- ii. H₀₂: Accounting information system integration has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.
- iii. H₀₃: Real-time financial data processing has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

Significance of the Study

The study will be beneficial to several individuals and institutions because it will provide empirical evidence on the effect of digital accounting system adoption on financial reporting quality among listed manufacturing companies in Nigeria. The findings will be useful to the following stakeholders:

- i. **Management of Listed Manufacturing Companies:** The study will be useful to the management of listed manufacturing companies by providing evidence on how digital accounting system adoption, accounting information system integration and real-time financial data processing influence financial reporting quality. The findings may assist management in evaluating their existing accounting technologies and making informed decisions concerning investment in appropriate digital accounting systems. It may also help management identify areas where improvements in accounting information systems and financial data processing are required to enhance the quality of financial reports.
- ii. **Accountants and Financial Reporting Personnel:** The study will benefit accountants, auditors and other financial reporting personnel by improving their understanding of the relationship between digital accounting technologies and financial reporting quality. The findings may assist them in identifying the technological practices that can support more accurate, reliable and timely financial information. It may also encourage accounting professionals to improve their technological competencies and adapt to emerging digital accounting practices.
- iii. **Investors and Shareholders:** Investors and shareholders will benefit from the study because improved understanding of the relationship between digital accounting systems and financial reporting quality can assist them in assessing the reliability of information contained in corporate financial reports. The findings may provide useful information for investment decisions by highlighting the importance of accounting systems and technologies in the production of quality financial information.
- iv. **Auditors:** The study will be useful to external and internal auditors because it will provide evidence on how digital accounting system adoption, system integration and real-time data processing relate to financial reporting quality. This may assist auditors in identifying areas of accounting information systems that require greater attention during audit planning, risk assessment and evaluation of internal controls.
- v. **Regulatory Bodies:** Regulatory institutions responsible for monitoring listed companies and financial reporting practices in Nigeria will benefit from the findings of the study. The evidence generated may assist regulators in developing or improving policies, guidelines and monitoring mechanisms relating to digital accounting practices, financial reporting and technology-enabled accounting systems among listed companies.
- vi. **Nigerian Exchange and Capital Market Participants:** The Nigerian Exchange and other capital market participants may find the study useful because the quality of financial information is important for maintaining confidence in the capital market. The findings may provide evidence that can support initiatives aimed at improving corporate disclosure practices, financial reporting quality and the reliability of information provided by listed manufacturing companies.

- vii. **Government and Policymakers:** The study will provide useful information to government agencies and policymakers concerned with corporate governance, financial reporting and digital transformation in Nigeria. The findings may support the formulation of policies that encourage appropriate adoption and effective utilisation of digital accounting technologies while promoting transparency and accountability among listed companies.
- viii. **Researchers and Students:** The study will serve as a useful reference material for students, researchers and academics interested in digital accounting systems, accounting information systems and financial reporting quality. It will contribute to existing literature by providing empirical evidence from listed manufacturing companies in Nigeria and may provide a basis for further studies on digital transformation and accounting practices using secondary data.

Operational Definition of Terms

The following terms operationalized the study:

- i. **Digital Accounting System:** A digital accounting system is a technology-based system used for recording, processing, storing, and reporting financial transactions: in this study, it refers to the electronic accounting tools and technologies used by listed manufacturing companies in Nigeria to manage accounting activities and produce financial information.
- ii. **Digital Accounting System Adoption:** Digital accounting system adoption is the process of accepting and incorporating digital accounting technologies into an organization's accounting operations: in this study, it refers to the extent to which listed manufacturing companies in Nigeria use digital accounting systems in recording transactions, processing financial data, and preparing financial reports.
- iii. **Financial Reporting:** Financial reporting is the process of preparing and presenting financial information about an organization: in this study, it refers to the preparation and presentation of financial statements and other financial information by listed manufacturing companies for investors, shareholders, regulators, and other stakeholders.
- iv. **Financial Reporting Quality:** Financial reporting quality is the extent to which financial reports provide useful, accurate, reliable, relevant, and understandable information: in this study, it refers to the quality of financial information produced by listed manufacturing companies and its usefulness in supporting sound economic and investment decisions.
- v. **Accounting Information:** Accounting information is financial and related information generated from an organization's accounting activities: in this study, it includes information about revenues, expenses, assets, liabilities, equity, cash flows, and other financial transactions processed by listed manufacturing companies.
- vi. **Accounting Software:** Accounting software is a computer application designed to record, process, store, and report financial transactions: in this study, it refers to the digital programs used by listed manufacturing companies to perform accounting functions, maintain financial records, and facilitate the preparation of financial reports.
- vii. **Automation:** Automation is the use of technology to perform tasks with little or no direct human intervention: in this study, it refers to the ability of digital accounting systems to automatically perform accounting activities such as transaction recording, calculations, data processing, reconciliation, and report generation.
- viii. **Accuracy:** Accuracy is the degree to which financial information correctly represents the actual transactions and financial activities of an organization: in this study, it refers to the ability of digital accounting systems

to minimize accounting errors and improve the correctness and dependability of financial information produced by listed manufacturing companies.

- ix. **Timeliness:** Timeliness is the extent to which financial information is made available to users when it is required for decision-making: in this study, it refers to the ability of digital accounting systems to speed up the recording, processing, and preparation of financial reports by listed manufacturing companies in Nigeria.

Review of Related Literature

Conceptual Review

Digital accounting system adoption

Digital accounting system adoption refers to the organizational process through which accounting activities are transferred from predominantly manual or conventional information-processing arrangements to digitally enabled systems that facilitate transaction recording, information processing, reporting, control, and financial decision-making. The concept therefore extends beyond merely purchasing accounting software because adoption involves organizational acceptance, integration into accounting routines, and actual utilization of digital capabilities. Cloud-based accounting research demonstrates that adoption is shaped by perceived technological benefits, organizational readiness, client readiness, and external pressures, indicating that adoption is simultaneously a technological and organizational phenomenon (Ma et al., 2021). Similarly, evidence from accounting practices suggests that perceptions of risk, organizational size, technological awareness, and readiness influence the movement from awareness of digital accounting technologies toward practical implementation (Van den Bergh & Rudansky-Kloppers, 2019).

Conceptually, digital accounting system adoption can be understood through several interconnected dimensions, including perceived usefulness, system quality, information quality, usability, organizational capability, and environmental support. Its significance arises from the capacity of digital systems to improve the speed, accessibility, consistency, and processing of accounting information while supporting financial monitoring and managerial decision-making. Rather than treating adoption as an isolated technological event, contemporary accounting research increasingly associates digital system usage with organizational performance because accounting information constitutes an important resource for operational and strategic decisions. Empirical evidence indicates that digital accounting system usage can contribute to improved SME performance, while organizational circumstances and crisis conditions may alter the strength and nature of this relationship (Lutfi et al., 2022).

The relevance of digital accounting system adoption is particularly evident in small and medium-sized enterprises, where limited financial, technological, and human resources can make accounting efficiency strategically important. Adoption may provide real-time access to financial information, automate repetitive accounting procedures, reduce dependence on physical records, and facilitate more timely managerial responses. However, adoption is not determined solely by the perceived advantages of technology. Technological compatibility, complexity, organizational resources, employee capabilities, senior management support, perceived usefulness, perceived ease of use, and institutional pressures can jointly influence adoption intentions. This multidimensional character demonstrates that digital accounting adoption should be conceptualized as an interaction between technological attributes, organizational preparedness, individual perceptions, and environmental conditions rather than as a simple decision to acquire accounting software (Mujalli et al., 2024).

A further conceptual dimension concerns the distinction between initial adoption and sustained utilization. Initial adoption establishes the organizational decision to implement a digital accounting system, whereas continued use reflects whether the technology becomes sufficiently embedded in accounting practices to generate enduring

organizational value. This distinction is important because implementation does not automatically guarantee effective utilization. Research on digital accounting systems identifies system quality, information quality, perceived usefulness, perceived ease of use, confirmation, and user satisfaction as interconnected factors influencing continued usage. The theoretical integration of the Technology Acceptance Model, Information Systems Success Model, and Expectation-Confirmation Model consequently suggests that digital accounting adoption should be examined as a continuing process involving acceptance, experience, evaluation, adaptation, and institutionalization (Al-Hattami & Almaqtari, 2023).

Furthermore, contemporary understanding of digital accounting system adoption increasingly moves beyond the narrow question of whether organizations use accounting technology toward examining how digital systems reshape accounting processes, organizational capabilities, information accessibility, and decision structures. The concept consequently encompasses technological acceptance as well as organizational transformation, because the value derived from adoption depends upon the alignment between system capabilities, users, organizational routines, governance arrangements, and strategic requirements. This perspective provides a stronger conceptual foundation for examining adoption as an evolving organizational capability whose effectiveness depends upon both technological functionality and the capacity of organizations to integrate digital accounting into broader processes of information management and decision-making.

Accounting information system integration

Accounting information system integration refers to the degree to which accounting information systems are interconnected with organizational functions, databases, business processes, and other information technologies to facilitate coordinated collection, processing, storage, and dissemination of financial information. The concept extends beyond the technical connection of software because effective integration requires accounting processes to operate coherently with broader organizational activities. In ERP environments, integrated AIS can support business development, organizational process improvement, and responsiveness to market requirements, thereby positioning accounting information as part of an interconnected organizational information infrastructure rather than an independent record-keeping mechanism (Thong, 2017). From an implementation perspective, integration also involves the alignment of legacy accounting applications, ERP functionality, accounting processes, internal controls, and organizational requirements, demonstrating that AIS integration represents a multidimensional process involving both technological and organizational transformation (Al-Muharfi, 2014).

A fundamental dimension of accounting information system integration is the establishment of seamless information flows across accounting and operational processes. Integration enables transactions originating from sales, procurement, inventory, production, payroll, and other organizational activities to be captured and processed within interconnected information environments, reducing unnecessary duplication and facilitating consistency among organizational records. The conceptual significance of integration therefore lies in its capacity to connect dispersed information resources and transform accounting data into information that can be utilized across managerial and operational contexts. Rather than evaluating integration solely according to whether systems share a database, its effectiveness should also be considered in terms of how integrated information is assimilated into business processes and contributes to organizational capabilities and performance (Elbashir et al., 2021).

Accounting information system integration is also relevant to the quality, accessibility, and governance of accounting information because fragmented systems can create duplicated records, reconciliation requirements, processing delays, and inconsistencies across organizational units. Integrated environments can establish more coherent information architectures through which accounting information becomes available across interconnected processes and decision levels. Nevertheless, integration may simultaneously create new dependencies because organizational actors become increasingly reliant upon common technological infrastructures and standardized

information structures. Contemporary scholarship on accounting digitalization consequently emphasizes that technological integration can alter professional boundaries, organizational power relationships, and processes through which accounting knowledge is produced and used, indicating that AIS integration has implications extending beyond technical efficiency (Knudsen, 2020).

The application of accounting information system integration is increasingly associated with emerging digital infrastructures, particularly ERP platforms, cloud technologies, distributed ledgers, and electronically coordinated business processes. Such developments expand the meaning of integration from internal connectivity toward interoperability among organizational systems and external economic participants. Distributed ledger research, for instance, demonstrates how shared accounting architectures can be designed to improve interoperability and auditability while connecting accounting information with digitally executed economic exchanges. This development suggests that integration is progressively becoming an architectural issue involving common data structures, automated verification, interoperability, and digitally coordinated transactions rather than simply the linking of conventional accounting applications (Weigand et al., 2020).

Furthermore, accounting information system integration can be conceptualized as an evolving organizational capability through which accounting information becomes embedded within interconnected technological and managerial processes. Its effectiveness depends upon the compatibility of information architectures, business procedures, internal controls, user capabilities, governance arrangements, and organizational objectives. Consequently, integration should not be interpreted as an end in itself, but as a mechanism through which organizations coordinate financial and operational information to support control, accountability, reporting, and decision-making. This conceptualization provides a basis for examining differences in integration maturity and for understanding why technically connected systems may produce different organizational outcomes depending upon how deeply their information flows and accounting functionalities are embedded within organizational processes.

Real-time financial data processing

Real-time financial data processing refers to the capability of an accounting information environment to capture, validate, process, update, and communicate financial transactions with minimal temporal delay after their occurrence. Conceptually, it represents a shift from periodic, batch-oriented accounting toward continuous processing in which financial information remains closely synchronized with underlying economic events. This transformation is associated with technological developments such as cloud computing, enterprise application integration, business intelligence, and automated information flows, which collectively enable organizations to obtain more current financial information for operational and managerial purposes (Bendovschi, 2015). Real-time processing therefore changes the temporal characteristics of accounting information by reducing the interval between transaction occurrence, data processing, and information availability, thereby strengthening the capacity of accounting systems to support timely organizational responses (Wang & Kogan, 2018).

A central dimension of real-time financial data processing is immediacy, which concerns the ability of an accounting system to process transactions continuously rather than accumulating them for subsequent batch processing. This characteristic requires technological infrastructures capable of handling high-frequency data inputs, automated transaction processing, synchronized databases, and rapid information dissemination. Its conceptual significance extends beyond processing speed because immediate processing can alter how accounting information is consumed, interpreted, and incorporated into organizational decisions. As digitalization accelerates accounting activities, users increasingly expect financial information to become available closer to the point at which business events occur, thereby encouraging accounting systems and professionals to develop capabilities for continuous information provision rather than relying predominantly upon conventional reporting cycles (Gulin et al., 2019).

Real-time financial data processing is particularly relevant to financial monitoring, management control, reporting, and decision-making because continuously updated information can reduce informational latency between organizational events and managerial responses. Instead of depending exclusively upon historical periodic reports, decision makers can access more granular and frequently refreshed information concerning financial transactions and organizational performance. Contemporary accounting information architectures increasingly support this orientation through machine-readable data standards, centralized repositories, automated data feeds, and interfaces capable of presenting information according to users' changing requirements. Such developments indicate that real-time processing can broaden the informational scope of accounting by connecting financial information with operational and external data, while simultaneously increasing expectations concerning the speed, relevance, and adaptability of accounting information (Pei & Vasarhelyi, 2020).

The application of real-time financial data processing is also transforming accounting work and the organizational processes through which financial information is produced. Automated and continuously updated accounting environments can redistribute accountants' activities away from repetitive data-entry and period-end processing toward interpretation, analysis, exception management, and advisory functions. However, the concept should not be equated automatically with efficiency because continuous processing may introduce new requirements concerning data quality, system reliability, interoperability, professional competencies, and organizational adaptation. Research on continuous accounting demonstrates that real-time capabilities are embedded within broader technological and organizational arrangements, with software functioning not merely as a neutral processing instrument but also as a mechanism through which new accounting practices and expectations are introduced and disseminated (Jemine et al., 2023).

Furthermore, real-time financial data processing can be understood as an evolving capability that reshapes the temporal logic of accounting information systems. Its contemporary significance lies in the movement from delayed financial representation toward continuously updated informational environments in which transactions, processing, analysis, monitoring, and reporting increasingly occur as interconnected activities. The concept therefore provides an important analytical basis for examining how organizations achieve financial information immediacy while maintaining accuracy, control, consistency, security, and interpretive usefulness. Its theoretical importance rests on recognizing that faster processing alone does not guarantee superior accounting information; rather, value emerges when processing speed is aligned with data integrity, system capability, organizational processes, and the informational requirements of decision makers.

Financial reporting quality

Financial reporting quality refers to the extent to which financial reports faithfully communicate an entity's underlying economic activities and provide useful information for users' economic decisions. The concept is multidimensional because quality cannot be reduced to compliance with accounting standards alone, but encompasses the credibility, relevance, faithful representation, comparability, understandability, timeliness, and verifiability of reported information. Contemporary scholarship emphasizes that financial reporting quality is closely connected with the information needs of investors and other stakeholders because higher-quality reporting reduces uncertainty and strengthens the usefulness of financial information for economic decision-making (Dănescu & Stejerean, 2022). It is therefore more appropriately conceptualized as a continuous attribute of financial reporting rather than a binary condition in which reports are simply classified as either good or poor. The quality of reporting is also influenced by the reporting system through which economic events are transformed into financial information, making organizational reporting processes an important component of the construct (DeFond & Zhang, 2014).

A major conceptual dimension of financial reporting quality concerns the characteristics used to determine whether reported information is useful and faithfully reflects the economic substance of transactions. Relevance implies that information can influence users' decisions, whereas faithful representation concerns completeness, neutrality, and freedom from material error. Comparability enables users to identify similarities and differences across entities and periods, while understandability, verifiability, and timeliness strengthen the accessibility and credibility of reported information. These dimensions demonstrate that financial reporting quality involves both the informational content of reports and the manner in which that information is communicated. Empirical evidence further indicates that greater accounting comparability can enhance several manifestations of reporting quality, including earnings persistence, the relationship between accruals and cash flows, and the likelihood of financial restatements, demonstrating that comparability is not merely a presentation characteristic but an important component of the broader information environment (Chen & Gong, 2019).

The measurement of financial reporting quality represents another important conceptual issue because the construct is not directly observable and different research traditions operationalize it through different indicators. Accrual-based measures frequently assess the extent of discretionary accruals and earnings management, while other approaches examine restatements, financial violations, earnings persistence, value relevance, disclosure characteristics, or qualitative attributes of financial information. Consequently, the selection of a measurement approach depends substantially on the theoretical meaning assigned to reporting quality and the particular aspect of quality under investigation. Recent methodological scholarship confirms that no single proxy captures every dimension of the construct and highlights the continuing importance of carefully distinguishing among alternative measures when evaluating financial reporting quality (Alomair, 2025). This measurement diversity also explains why findings across studies may differ even when researchers employ the same broad concept.

Financial reporting quality has significant applications in corporate governance, capital-market efficiency, investment decisions, contracting, regulatory oversight, and stakeholder accountability because users depend upon financial reports to evaluate performance, financial position, risks, and future prospects. High-quality reporting can improve the information environment by reducing uncertainty and facilitating more informed assessments of firms, whereas poor-quality reporting can obscure underlying economic conditions and increase information risk. The governance and assurance environment surrounding reporting is consequently important because external monitoring can influence the credibility and reliability of reported information. Recent meta-analytic evidence illustrates the complexity of this relationship by demonstrating that abnormal audit fees are associated with financial reporting quality and that the observed relationship remains relevant across different financial reporting quality constructs and theoretical perspectives (Li & Liu, 2024). Thus, financial reporting quality should be understood within the broader institutional and governance structures that shape how financial information is prepared, scrutinized, communicated, and interpreted.

Furthermore, contemporary scholarship increasingly treats financial reporting quality as an evolving construct whose meaning is shaped by changes in accounting standards, reporting technologies, organizational incentives, regulatory expectations, and users' informational requirements. This perspective recognizes that high-quality reporting requires more than mechanical adherence to prescribed rules because preparers exercise judgments when estimating, measuring, classifying, and disclosing economic events. The quality of those judgments can be affected by incentives, uncertainty, information environments, and the consequences associated with alternative reporting choices. Accordingly, financial reporting quality provides a theoretically important lens for examining whether accounting information represents economic reality in a manner that remains useful, credible, transparent, and decision-relevant within changing financial and institutional environments.

Theoretical Review

This study was theoretically underpinned on Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) was developed by Davis (1989) to explain the factors that influence individuals' acceptance and use of technology. The model proposes that technology adoption is primarily determined by two major constructs: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which an individual believes that using a particular technology will enhance his or her job performance, while perceived ease of use refers to the extent to which the individual believes that using the technology will require little or no effort. According to Davis (1989), when users perceive a technology as useful and easy to use, they are more likely to develop a favourable attitude towards it and subsequently adopt and use it.

The Technology Acceptance Model is relevant to the adoption of digital accounting systems because the effectiveness of such systems depends not only on their availability but also on the willingness and ability of employees to use them. In the context of listed manufacturing companies in Nigeria, accounting personnel and other relevant employees are more likely to embrace digital accounting systems when they perceive that the systems can improve the efficiency and effectiveness of their accounting responsibilities. A digital accounting system that facilitates automated recording, processing, storage, and retrieval of financial information can reduce the time required to perform accounting tasks and improve the overall efficiency of financial reporting processes. Thus, perceived usefulness can serve as an important factor influencing the successful adoption and continued use of digital accounting systems within manufacturing companies.

Perceived ease of use is equally important to the adoption of digital accounting systems. Accounting systems that are complex, difficult to operate, or require extensive technical knowledge may discourage employees from using them effectively. Conversely, systems that are user-friendly, accessible, and easy to understand are more likely to be accepted and consistently used by accounting personnel. When employees can operate digital accounting systems with minimal difficulty, the likelihood of errors arising from improper use may be reduced. Consequently, the ease with which digital accounting systems can be used may influence the extent to which companies obtain the expected benefits of technology adoption.

The adoption and consistent use of digital accounting systems can also contribute to improved reporting efficiency. Digital systems automate several accounting processes that would otherwise require substantial manual intervention. Automation can facilitate faster processing of transactions, improve the consistency of accounting records, reduce delays, and minimise human errors in the preparation and presentation of financial information. For manufacturing companies that generate relatively large volumes of financial transactions, the ability to process accounting information efficiently is particularly important for producing financial reports within the required reporting timelines.

Furthermore, effective adoption of digital accounting systems has implications for financial reporting quality. Financial reporting quality is concerned with the extent to which financial information is accurate, reliable, relevant, timely, and useful to its users. Where digital accounting systems are properly adopted and effectively utilised, they can support the accurate capture, processing, storage, and reporting of financial information. This may enhance the reliability and timeliness of financial reports and reduce inconsistencies associated with manual accounting processes. Therefore, the Technology Acceptance Model provides a useful theoretical basis for explaining how acceptance and effective use of digital accounting technology can ultimately contribute to improved financial reporting quality.

The relevance of TAM to this study is therefore centred on the relationship between technology acceptance, digital accounting system adoption, and financial reporting quality. Perceived usefulness explains why manufacturing companies and their employees may adopt digital accounting systems when such systems are considered capable

of improving accounting and reporting performance. Perceived ease of use explains why systems that are simple and convenient to operate are more likely to be accepted and consistently utilised

Empirical Review

Fasina & Olayemi (2023) investigated the effect of accounting information systems on financial reporting quality among listed manufacturing companies in Nigeria. The study used a cross-sectional survey involving 276 respondents and employed Structural Equation Modelling for analysis. Findings revealed that system quality and user competence significantly improved financial reporting quality, indicating that effective accounting information systems enhance the usefulness and reliability of corporate reports.

Ogundajo et al. (2022) examined the influence of digitalized accounting systems on financial reporting quality among Nigerian manufacturing firms. Using 348 valid questionnaire responses, the researchers applied factor analysis and multiple regression techniques. The findings showed that digitalized accounting systems significantly influenced both fundamental and enhancing qualitative characteristics of financial information, suggesting that accounting software adoption strengthens the quality and usefulness of financial reporting.

Nworie et al. (2022) examined determinants of computerised accounting information-system adoption among listed Nigerian manufacturing firms. The researchers selected 21 firms and analyzed financial-statement data covering 2012–2021 using Prais-Winsten regression. Results indicated that firm size, capital turnover, and liquidity significantly influenced computerised accounting-system adoption, demonstrating that organizational characteristics and financial capacity are important considerations in implementing digital accounting technologies.

Okere (2022) investigated cloud accounting and the performance of listed manufacturing firms in Nigeria. The study combined primary and secondary data and examined ten listed manufacturing companies. The empirical analysis revealed that cloud accounting and associated costs significantly affected firm performance. The study concluded that adoption of cloud-based accounting technologies can influence organizational outcomes by improving accounting processes and supporting more efficient financial-information management.

Agboola et al. (2020) examined the impact of accounting information-system investment on manufacturing-company profitability in Nigeria. Using secondary data from five listed manufacturing companies covering 2013–2018, the researchers estimated fixed- and random-effects panel models and applied the Hausman test. The findings indicated that accounting information-system investment positively influenced financial performance, demonstrating the potential value of technology-related accounting investment within Nigerian manufacturing organizations.

Akaegbobi & Nwosu (2025) investigated blockchain technology and financial-reporting reliability among selected manufacturing firms in Anambra State, Nigeria. Using questionnaires administered to 207 respondents, the researchers employed descriptive statistics and Pearson Product-Moment Correlation. Findings showed that blockchain integration, distributive features, and blockchain-based accounting systems significantly improved financial-reporting reliability, suggesting that emerging digital technologies can strengthen transparency, verification, and reliability in accounting information.

Methodology

Research Design

This study adopts an *ex-post-facto* research design, relying on historical financial and corporate reporting data obtained from selected listed manufacturing companies in Nigeria. Since the data already exist in audited annual reports, financial statements, corporate governance reports, and other corporate disclosures, the *ex-post-facto* design is considered appropriate for examining the effect of digital accounting system adoption on financial

reporting quality. The study covers a twelve-year period from 2014 to 2025, providing sufficient observations to examine developments in digital accounting practices and their effect on the quality of financial reporting among listed manufacturing companies in Nigeria.

Area of Study

The study focuses on listed manufacturing companies in Nigeria, with particular emphasis on the effect of digital accounting practices on financial reporting quality. Specifically, the study examines the effect of Digital Accounting System Adoption (DASA), Accounting Information System Integration (AISi), and Real-Time Financial Data Processing (RTFDP) on Financial Reporting Quality (FRQ). The study is restricted to companies listed on the Nigerian Exchange Group (NGX) that fall within the manufacturing sector and meet the specified sampling criteria.

Sources of Data

The study relies exclusively on secondary data obtained from the audited financial statements, annual reports, corporate governance reports, and other relevant corporate disclosures of the sampled manufacturing companies for the period 2014 to 2025. These sources provide the information required to measure the study variables. The dependent variable, Financial Reporting Quality (FRQ), is derived from information contained in the financial statements and relevant corporate disclosures of the sampled companies. The independent variables - Digital Accounting System Adoption (DASA), Accounting Information System Integration (AISi), and Real-Time Financial Data Processing (RTFDP) are measured using information disclosed by the companies regarding their adoption and use of digital accounting systems, integration of accounting information systems, and real-time processing of financial information.

Population of the Study

The population of the study comprises all listed manufacturing companies in Nigeria that were listed on the Nigerian Exchange Group during the period covered by the study. These companies constitute the population from which the sampled companies are selected for examining the effect of digital accounting system adoption on financial reporting quality.

Sample Size and Sampling Technique

The study employs purposive sampling to select manufacturing companies that satisfy predetermined criteria, including consistent listing status, availability of audited annual reports, and accessibility of relevant financial and corporate disclosure information for the study period. Based on these criteria, the sample comprises Dangote Cement Plc, BUA Cement Plc, Lafarge Africa Plc, Nestlé Nigeria Plc, and Nigerian Breweries Plc.

These companies were selected because they are prominent listed manufacturing companies in Nigeria and have sufficient and accessible financial and corporate reporting information required for measuring the study variables over the period 2014 to 2025. The use of purposive sampling ensures that only companies with adequate and reliable data relevant to the objectives of the study are included in the analysis.

Model Specification

A. General Functional Form:

$$FRQ_{it} = f(DASA_{it}, AISi_{it}, RTFDP_{it})$$

B. Econometric Form:

$$FRQ_{it} = \beta_0 + \beta_1 DASA_{it} + \beta_2 AISi_{it} + \beta_3 RTFDP_{it} + C_i + \epsilon_{it}$$

Where:

FRQ_{it} = Financial Reporting Quality of firm i in year t

$DASA_{it}$ = Digital Accounting System Adoption of firm i in year t

$AISI_{it}$ = Accounting Information System Integration of firm i in year t

$RTFDP_{it}$ = Real-Time Financial Data Processing of firm i in year t

β_0 = Intercept term

$\beta_1, \beta_2, \beta_3$ = Coefficients to be estimated

c_i = Unobserved firm-specific effects

ε_{it} = Error term

Method of Data Analysis

Descriptive statistics were used to summarize the characteristics of the data, including the mean, standard deviation, minimum, maximum, and trends across the study period. Panel Least Squares (PLS) regression was employed to examine the effect of digital accounting practices on financial reporting quality among the sampled listed manufacturing companies in Nigeria.

Results and Interpretation

Descriptive Statistics

Table 1: Descriptive Statistics of the variables

	DASA	AISI	RTFDP	FRQ
Mean	0.636545	0.615636	0.584909	0.734000
Median	0.650000	0.620000	0.590000	0.740000
Maximum	0.850000	0.840000	0.830000	0.890000
Minimum	0.360000	0.340000	0.290000	0.550000
Std. Dev.	0.121537	0.131793	0.144580	0.090750
Skewness	-0.258660	-0.161346	-0.133026	-0.202756
Kurtosis	2.169519	1.956767	1.913426	1.954196
Jarque-Bera	2.193852	2.732731	2.867855	2.883250
Probability	0.333896	0.255032	0.238371	0.236543
Sum	35.01000	33.86000	32.17000	40.37000
Sum Sq.	23.08310	21.78340	19.94530	30.07630
Sum Sq. Dev.	0.797644	0.937953	1.128775	0.444720
Observations	55	55	55	55

Source: E-view 14.0 Statistical Output, 2026

Table 1 presents the descriptive statistics for Digital Accounting System Adoption (DASA), Accounting Information System Integration (AIS), Real-Time Financial Data Processing (RTFDP), and Financial Reporting Quality (FRQ) for the sampled firms over the 2015–2025 period.

The results indicate relatively high levels of digital accounting adoption and financial reporting quality. DASA records a mean of 0.6365 (63.65%), while AISI has a mean of 0.6156 (61.56%). RTFDP has the lowest mean among the digital accounting variables at 0.5849 (58.49%), whereas FRQ records the highest overall mean of 0.7340 (73.40%). The corresponding median values of 0.6500, 0.6200, 0.5900, and 0.7400, respectively, are close to the means, suggesting relatively balanced distributions with limited influence from extreme observations.

The variables also exhibit reasonable variation across firms and years. DASA ranges from 0.36 to 0.85, AISI from 0.34 to 0.84, RTFDP from 0.29 to 0.83, and FRQ from 0.55 to 0.90. In terms of dispersion, RTFDP records the highest standard deviation (0.1446), indicating the greatest variation in real-time financial data processing, followed by AISI (0.1318) and DASA (0.1215). FRQ has the lowest standard deviation (0.0908), indicating that financial reporting quality is comparatively more consistent across the sampled firms and years.

The distributional statistics indicate mild negative skewness for all variables, with values ranging from -0.1330 for RTFDP to -0.2587 for DASA. The relatively small skewness values suggest that the distributions are approximately symmetrical, with a slight concentration of observations toward higher values. Kurtosis values range from 1.9134 to 2.1695 , all below the normal-distribution benchmark of 3 , indicating relatively flat (platykurtic) distributions with lighter tails.

The Jarque–Bera normality tests further support the approximate normality of the variables. The Jarque–Bera statistics are 2.1939 (DASA), 2.7327 (AISI), 2.8679 (RTFDP), and 2.8833 (FRQ), with corresponding p-values of 0.3339 , 0.2550 , 0.2384 , and 0.2365 , respectively. Since all p-values exceed the 5% significance level, the null hypothesis of normality cannot be rejected. Overall, the descriptive evidence indicates relatively high digital accounting adoption and financial reporting quality, moderate variation across firms and years, and distributions that do not significantly depart from normality, supporting the use of subsequent parametric analyses, including panel regression techniques.

Table 2: Panel Regression Analysis Result of the Time Series Data

Dependent Variable: FRQ

Method: Panel Least Squares

Date: 09/03/26 Time: 09:40

Sample: 2014 2025

Periods included: 12

Cross-sections included: 5

Total panel (unbalanced) observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DASA	0.596572	0.055588	10.73199	0.0000
AISI	-0.094949	0.164279	-0.577971	0.5658
RTFDP	0.212059	0.147647	1.436254	0.1570
C	0.288674	0.014979	19.27143	0.0000
R-squared	0.994740	Mean dependent var		0.734000
Adjusted R-squared	0.994431	S.D. dependent var		0.090750
S.E. of regression	0.006772	Akaike info criterion		-7.081986
Sum squared resid	0.002339	Schwarz criterion		-6.935998
Log likelihood	198.7546	Hannan-Quinn criter.		-7.025531
F-statistic	3215.099	Durbin-Watson stat		1.072689
Prob(F-statistic)	0.000000			

Source: E-view 14.0 Statistical Output, 2026

Table 2 presents the results of the Panel Least Squares regression analyzing the effect of Digital Accounting System Adoption (DASA), Accounting Information System Integration (AISI), and Real-Time Financial Data Processing (RTFDP) on Financial Reporting Quality (FRQ) of the five sampled firms over the period 2014 to 2025. The regression is based on 55 unbalanced panel observations from five firms over twelve periods.

The results reveal that Digital Accounting System Adoption (DASA) (coefficient = 0.5966 , $p = 0.0000$) has a positive and statistically significant effect on Financial Reporting Quality (FRQ) at the 5% level. This indicates that greater adoption of digital accounting systems is associated with improved financial reporting quality. Specifically, a one-unit increase in DASA is associated with approximately a 0.5966 -unit increase in FRQ, holding other variables constant. This suggests that the adoption of digital accounting technologies can enhance the accuracy, reliability, timeliness, and overall quality of financial information reported by firms.

In contrast, Accounting Information System Integration (AISI) (coefficient = -0.0949, $p = 0.5658$) has a negative but statistically insignificant effect on FRQ. Although the negative coefficient suggests an inverse relationship between AISI and financial reporting quality, the probability value of 0.5658 is considerably greater than the 5% significance level. Therefore, the effect is not statistically significant, implying that variations in accounting information system integration do not have a significant effect on financial reporting quality within the sampled firms and study period.

Similarly, Real-Time Financial Data Processing (RTFDP) (coefficient = 0.2121, $p = 0.1570$) shows a positive but statistically insignificant effect on FRQ. The positive coefficient suggests that increased real-time processing of financial data is associated with an improvement in financial reporting quality. However, with a p -value of 0.1570, which exceeds the 5% significance threshold, the relationship is not statistically significant. Thus, there is insufficient statistical evidence to conclude that real-time financial data processing has a significant effect on financial reporting quality among the sampled firms.

The constant term (C) is positive and highly significant (coefficient = 0.2887, $p = 0.0000$). This indicates that, mathematically, when DASA, AISI, and RTFDP are held at zero, the predicted level of FRQ is approximately 0.2887. However, as with most regression intercepts, this interpretation should be treated cautiously because a situation in which all digital accounting variables are exactly zero may not have practical relevance for the sampled firms.

The R-squared value of 0.9947 indicates that approximately 99.47% of the variation in Financial Reporting Quality (FRQ) is explained by DASA, AISI, and RTFDP in the model. This represents a very high explanatory power. The adjusted R-squared value of 0.9943 further indicates that approximately 99.43% of the variation in FRQ remains explained after adjusting for the number of explanatory variables included in the model. The relatively small difference between the R-squared and adjusted R-squared values suggests that the explanatory variables collectively provide strong explanatory power.

The F-statistic of 3215.099 with a probability value of 0.0000 indicates that the regression model is statistically significant overall at the 5% level. This means that DASA, AISI, and RTFDP jointly have a statistically significant effect on Financial Reporting Quality. Therefore, although AISI and RTFDP individually do not have statistically significant effects, the independent variables collectively provide significant explanatory power for FRQ.

Finally, the Durbin-Watson statistic of 1.0727 suggests the possibility of positive serial correlation in the residuals. Since the value is considerably below the conventional benchmark of 2.0, the result indicates that the residuals may not be completely independent over time. This should be considered when conducting the subsequent diagnostic tests and, where necessary, robust estimation procedures should be applied to ensure reliable statistical inference.

Overall, the regression results indicate that DASA is the only individual digital accounting variable with a statistically significant positive effect on FRQ, while AISI has a negative and insignificant effect and RTFDP has a positive but insignificant effect. Nevertheless, the three variables jointly have a statistically significant effect on Financial Reporting Quality.

Test of Hypotheses

Test of Hypothesis One

Restatement of the Hypothesis in Null and Alternate forms:

H_{01} : Digital accounting system adoption has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

H_{a1} : Digital accounting system adoption has a significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

Statement of Decision Rule:

Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, accept the null hypothesis and reject the alternate hypothesis.

Decision:

From the regression result, the coefficient of DASA is 0.5966 with a t-statistic of 10.73199 and a p-value of 0.0000, which is less than 0.05. Therefore, H_{01} is rejected, and the alternate hypothesis is accepted.

This indicates that digital accounting system adoption has a statistically significant positive effect on financial reporting quality among listed manufacturing companies in Nigeria during the study period. The positive coefficient further indicates that greater adoption of digital accounting systems is associated with improved financial reporting quality.

Test of Hypothesis Two

Restatement of the Hypothesis in Null and Alternate forms:

H_{02} : Accounting information system integration has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

H_{a2} : Accounting information system integration has a significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

Statement of Decision Rule:

Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, accept the null hypothesis and reject the alternate hypothesis.

Decision:

The coefficient of AISI is -0.0949 with a t-statistic of -0.57797 and a p-value of 0.5658, which is greater than 0.05. Therefore, H_{02} is accepted, and the alternate hypothesis is rejected.

This implies that accounting information system integration does not have a statistically significant effect on financial reporting quality among listed manufacturing companies in Nigeria over the study period. Although the coefficient is negative, the relationship is not statistically significant at the 5% level.

Test of Hypothesis Three

Restatement of the Hypothesis in Null and Alternate forms:

H_{03} : Real-time financial data processing has no significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

H_{a3} : Real-time financial data processing has a significant effect on financial reporting quality among listed manufacturing companies in Nigeria.

Statement of Decision Rule:

Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, accept the null hypothesis and reject the alternate hypothesis.

Decision:

The coefficient of RTFDP is 0.2121 with a t-statistic of 1.436254 and a p-value of 0.1570, which is greater than 0.05. Therefore, H_{03} is accepted, and the alternate hypothesis is rejected.

Summary of Findings, Conclusion and Recommendations

Summary of Findings

The key findings of the study are elucidated below:

- i. Digital Accounting System Adoption (DASA) was found to have a positive and statistically significant effect on financial reporting quality, with a coefficient of 0.5966 ($t = 10.7320$, $p = 0.0000$). This indicates that increased adoption of digital accounting systems significantly improves the quality of financial reporting among the sampled listed manufacturing companies. The positive relationship suggests that the use of digital accounting technologies enhances the accuracy, timeliness, reliability, and efficiency of financial information, thereby contributing to higher-quality financial reports.
- ii. Accounting Information System Integration (AISI) exhibited a negative but statistically insignificant effect on financial reporting quality, with a coefficient of -0.0949 ($t = -0.5780$, $p = 0.5658$). Although the negative coefficient suggests a potential inverse relationship between accounting information system integration and financial reporting quality, the lack of statistical significance indicates that the integration of accounting information systems does not meaningfully influence the quality of financial reporting within the sampled firms. This may suggest that the benefits of system integration depend on factors such as implementation effectiveness, employee competence, system compatibility, and the quality of the underlying information systems.
- iii. Real-Time Financial Data Processing (RTFDP) showed a positive but statistically insignificant effect on financial reporting quality, with a coefficient of 0.2121 ($t = 1.4363$, $p = 0.1570$). This finding suggests that although real-time processing of financial data has a positive direction of association with financial reporting quality, the effect is not sufficiently strong to be statistically significant. The result implies that the availability of real-time financial data alone may not guarantee improved reporting quality, as other organisational, technological, and managerial factors may determine how effectively such information is utilised in preparing financial reports.

Conclusion

The study conclusively found that among the selected digital accounting variables—Digital Accounting System Adoption (DASA), Accounting Information System Integration (AISI), and Real-Time Financial Data Processing (RTFDP)—only Digital Accounting System Adoption exhibited a statistically significant effect on Financial Reporting Quality (FRQ) of the sampled listed manufacturing companies in Nigeria. Notably, the significant relationship was positive, suggesting that increased adoption of digital accounting systems contributes meaningfully to improved financial reporting quality.

On the other hand, Accounting Information System Integration and Real-Time Financial Data Processing showed statistically insignificant effects on Financial Reporting Quality. Although AISI displayed a negative coefficient, its lack of statistical significance implies that accounting information system integration does not exert a consistent or measurable influence on financial reporting quality within the study period. Similarly, RTFDP exhibited a positive coefficient but failed to demonstrate a statistically significant effect, suggesting that the availability and processing of financial information in real time may not, by itself, guarantee improvements in the quality of financial reporting.

These findings imply that financial reporting quality among the sampled Nigerian manufacturing companies is more strongly influenced by the adoption of digital accounting systems than by system integration or real-time financial data processing considered independently. The results underscore the importance of effective digital accounting adoption in enhancing the accuracy, reliability, timeliness, and efficiency of financial information and, consequently, the quality of corporate financial reports.

Therefore, while accounting information system integration and real-time financial data processing remain important components of digital transformation, manufacturing companies may need to focus on the effective adoption and utilisation of digital accounting systems, supported by appropriate employee skills, adequate technological infrastructure, system security, and sound internal controls. Such a comprehensive approach can enable firms to maximise the benefits of digital accounting and improve the quality and credibility of financial reporting in the long run.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

- i. Since digital accounting system adoption was found to have a statistically significant positive effect on financial reporting quality, listed manufacturing companies should prioritize the adoption and continuous upgrading of reliable digital accounting systems. Firms should invest in modern accounting software, automated financial reporting technologies, secure digital platforms, and regular staff training to ensure that these systems are effectively utilised. Strengthening digital accounting capabilities can improve the accuracy, timeliness, reliability, and efficiency of financial reporting while reducing manual errors and enhancing the overall credibility of financial information.
- ii. Although accounting information system integration was found to have a negative but statistically insignificant effect on financial reporting quality, firms should not overlook the importance of effective system integration. Manufacturing companies should ensure that their accounting systems are properly connected with other business functions, such as sales, procurement, inventory, payroll, and finance. Management should also address system compatibility, employee competence, data security, and internal controls to ensure that integration produces reliable and useful financial information. Proper implementation and monitoring may enable firms to realise the potential reporting benefits of integrated accounting systems.
- iii. Since real-time financial data processing showed a positive but statistically insignificant effect on financial reporting quality, manufacturing companies should strengthen their capacity to process and utilise financial information promptly. Firms should invest in appropriate digital infrastructure, automated data-processing tools, and secure information systems while ensuring that employees possess the technical skills required to use them effectively. Real-time processing should also be supported by strong verification and internal control mechanisms so that speed does not compromise the accuracy and reliability of financial information. This can enhance management decision-making and potentially contribute to improved financial reporting quality over time.

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