

**ACCOUNTING SOFTWARE DEPLOYMENT AND CORPORATE
PROFITABILITY IN MODERN ERA: EVIDENCE FROM LISTED
INDUSTRIAL GOODS FIRMS IN NIGERIA**

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Abstract: *The study examined the effect of accounting software deployment on corporate profitability among listed industrial goods firms in Nigeria. Accounting software deployment was measured using intensity of accounting software while earnings per share served as the proxy for corporate profitability. The study adopted an ex-post facto research design to analyze historical financial data from the selected firms. The population consisted of all twelve industrial goods firms listed on the Nigerian Exchange Group as of December 31, 2024, from which nine firms were purposively sampled based on data availability. Secondary data were collected from the firms' audited annual reports covering the period 2015 to 2024. The hypothesis was tested using panel estimated Generalized Least Squares regression to account for cross-sectional dependence in the data. The finding revealed that intensity of accounting software deployment has a positive and significant effect on earnings per share ($\beta = 7.846, p = 0.0065$). In conclusion, firms that integrate and utilize accounting software more intensively are able to streamline financial processes, reduce errors, and provide more timely and accurate information for decision-making, which translates into improved profitability reflected in higher earnings per share. The study recommended that the management of listed industrial goods firms in Nigeria should more actively invest in and expand the use of advanced accounting software across all financial operations. By doing so, management can ensure more accurate, timely, and efficient financial reporting, which directly contributes to improving profitability.*

Keywords: *Accounting Software Deployment, Corporate Profitability, Earnings Per Share*

1.0 INTRODUCTION

In the contemporary business terrain, technology has become an indispensable tool for firms seeking to enhance efficiency and maintain competitiveness. Over the past few decades, the rapid evolution of digital tools has transformed how businesses manage operations, make decisions, and engage with stakeholders (Ikwuo et al., 2025; Nduokafor et al., 2024).

Accounting, traditionally a manual and labor-intensive function, has experienced one of the most significant shifts as firms adopt computerized systems. In Nigeria, where industrial goods firms operate in a highly competitive environment, the need to streamline financial operations, ensure accuracy in reporting, and maintain regulatory compliance has never been more pressing. Mukherjee et al. (2025) argued that firms are increasingly compelled to integrate technology into their accounting processes to meet the demands of a dynamic market and to make timely, data-driven decisions. The industrial goods sector, which includes companies involved in manufacturing and production, is particularly sensitive to operational efficiency and cost control. No doubt, accurate and timely financial information enables managers to monitor expenses, allocate resources effectively, and plan for sustainable growth (Ngoc, 2025). Against this backdrop, understanding how technological tools, such as accounting software, influence firm performance has gained considerable attention from both researchers and practitioners. The adoption of accounting software is no longer merely a technical upgrade; it represents a strategic decision that can affect a company's operational processes, reporting accuracy, and overall financial health (Nwankwo et al., 2025). Consequently, investigating its impact on corporate profitability within the Nigerian context offers useful hints on the role of technology in supporting business objectives and enhancing firm competitiveness.

Accounting software has become a critical component of modern business management, offering capabilities that extend far beyond simple bookkeeping. Contemporary systems provide real-time financial reporting, automated transaction processing, and analytical tools that allow managers to gain a comprehensive view of the firm's financial performance (Ndubuisi et al., 2024). For companies operating in Nigeria's industrial goods sector, where margins can be tight and operational costs are often high, the ability to manage financial data efficiently is particularly relevant. Corporate profitability, which reflects the capacity of a firm to generate earnings relative to its costs and resources, is a key measure of business success (Ruhshona, 2025). Profitability is influenced by multiple factors, including revenue management, cost control, investment decisions, and operational efficiency. The use of accounting software can support each of these factors by providing accurate and timely information that informs decision-making (Nwekwo et al., 2024). In addition, regulatory compliance and reporting standards in Nigeria require firms to maintain transparent and verifiable financial records, which accounting software facilitates. Beyond the internal benefits, firms that utilize such systems may also enhance their credibility with investors, creditors, and other stakeholders by demonstrating sound financial management practices. The relevance of accounting software usage in promoting profitability is therefore tied to its capacity to improve the accuracy, speed, and reliability of financial information, which in turn influences managerial decisions and strategic planning (Nworie et al., 2022).

The relationship between accounting software usage and corporate profitability is increasingly recognized as significant, particularly in environments where operational efficiency and financial accuracy are critical. By automating routine accounting tasks, these systems reduce the likelihood of human error, free up managerial time for strategic planning, and provide data that supports better resource allocation (Nwekwo et al., 2024). Firms that adopt accounting software are often able to track costs more accurately, identify areas of inefficiency, and make informed pricing and investment decisions. Moreover, such systems enable firms to generate comprehensive financial reports that facilitate performance monitoring and benchmarking against industry standards. This capability allows managers to identify trends, forecast financial outcomes, and implement corrective actions more swiftly, which can directly affect

profit margins (Ajiga et al., 2024). Additionally, accounting software often integrates with other business systems, such as inventory management and procurement, creating a more cohesive and efficient operational framework (Rahwani et al., 2023). The resulting synergy between accurate financial data and operational oversight can lead to improved decision-making and higher profitability.

In a perfect business environment, industrial goods firms would have access to accurate, timely, and comprehensive financial information that allows managers to make informed decisions (Nworie et al., 2023). Companies would efficiently track revenues and expenses, manage resources effectively, and ensure compliance with all regulatory requirements without unnecessary delays or errors. Financial data would be easily accessible, organized, and integrated with other operational functions such as production and inventory management. Managers would be able to analyze trends, forecast performance, and implement strategies that consistently enhance profitability. Firms would operate smoothly, with financial processes that support growth, minimize waste, and optimize returns for shareholders. In such a scenario, the use of technology in accounting would strengthen operational efficiency and provide a reliable basis for strategic decision-making, allowing companies to respond quickly to market changes while maintaining financial stability (Nwankwo et al., 2025).

In reality, many industrial goods firms in Nigeria face challenges in managing financial information, often relying on outdated or partially automated systems that do not fully capture the complexity of their operations. Errors in record-keeping, delays in generating reports, and difficulties in integrating financial data with other business functions are common (Nwekwo et al., 2024). Nworie et al. (2023) argued that some firms still depend heavily on manual processes, which can be time-consuming and prone to mistakes. Even when accounting software is implemented, lack of adequate training, inconsistent usage, or limited functionality can reduce its effectiveness. This situation creates gaps in the quality and reliability of financial information, making it harder for managers to make timely and well-informed decisions. As a result, firms may struggle to optimize their operations, control costs, and respond effectively to market demands, affecting overall performance and growth potential.

The consequences of these challenges are significant for the profitability and sustainability of industrial goods firms. Poor financial management can lead to misallocation of resources, increased operational costs, and missed opportunities for revenue generation. Inaccurate or delayed financial information can impair strategic planning, hinder investment decisions, and reduce the ability of firms to remain competitive in a rapidly evolving market (Ndubuisi et al., 2024). Investors and other stakeholders may lose confidence in companies that cannot demonstrate sound financial management, limiting access to capital and growth opportunities. Ultimately, the inability to fully leverage accounting software to support financial processes can weaken profitability and hinder long-term success.

Despite the growing body of research on accounting software adoption and firm performance, gaps remain in the existing literature, particularly in the context of listed industrial goods firms in Nigeria. Previous studies have focused on SMEs (Nwankwo et al., 2025), healthcare firms (Ndubuisi et al., 2024), corporate organizations in Southeast Nigeria (Nwekwo et al., 2024), hypermarkets in Jordan (Rahahle et al., 2024), and oil and gas firms (Izuchukwu & Nkiru, 2022), highlighting improvements in financial reporting accuracy, operational efficiency, and cost control. Other studies have explored computerized accounting systems and cost

management in industrial goods firms (Nworie et al., 2023), accounting software and cost control in banks (Ogundajo et al., 2022), determinants of software adoption such as firm size and liquidity (Nworie et al., 2022), as well as corporate reporting quality (Olufemi et al., 2021) and firm performance in Malaysia (Chong & Nizam, 2018). While these studies provide useful hints into the benefits of accounting software, most focus on specific sectors, narrow performance metrics, or limited geographical contexts, with few examining the direct effect of accounting software intensity on corporate profitability measured by earnings per share in the Nigerian industrial goods sector. Additionally, the majority of existing research emphasizes either operational efficiency, cost control, or reporting quality rather than linking software deployment directly to shareholder returns. This highlights a clear gap in empirical evidence on how accounting software deployment, measured as intensity relative to total assets, influences profitability outcomes for listed industrial goods firms in Nigeria, justifying the need for the present study. Hence, the main objective of the study is to examine the effect of accounting software deployment on corporate profitability among listed industrial goods firms in Nigeria. The specific objective is to assess the effect of accounting software usage on earnings per share of industrial goods firms in Nigeria. In line with the above objective, the null hypothesis guiding the study is:

H_0 : The intensity of accounting software deployment does not significantly affect the earnings per share of listed industrial goods firms in Nigeria.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Accounting software deployment

Accounting software deployment refers to the adoption and integration of computerized systems that manage and process financial information within an organization (Rahmanian, 2025). It involves the use of digital tools to record, store, and analyze transactions, replacing traditional manual bookkeeping methods. Such software allows businesses to handle a wide range of financial activities, including invoicing, payroll management, expense tracking, and the preparation of financial statements (Nwankwo et al., 2025). The introduction of accounting software in a business setting transforms how financial records are maintained, improving the speed, accuracy, and organization of financial processes.

The presence of accounting software in a firm creates an environment where financial data is accessible in real time, enabling organizations to monitor cash flow, track expenditures, and generate reports without the delays associated with manual systems (Nwekwo et al., 2024). The deployment of these systems often requires training, careful planning, and adjustments to existing workflows to ensure that all financial operations are integrated seamlessly. By facilitating automation, accounting software reduces the likelihood of human error and improves the consistency of financial records, providing managers with a reliable source of information (Olufemi et al., 2021). It also allows firms to comply more effectively with regulatory requirements, as the software often comes with features designed to maintain accurate documentation and produce standardized reports.

In addition, the integration of accounting software affects decision-making processes by providing comprehensive data that can be analyzed quickly. Organizations are able to evaluate financial performance, identify trends, and make projections based on up-to-date information. The deployment of such systems represents more than a technological upgrade; it signifies a

transformation in how financial management is approached, shifting from manual and often fragmented methods to streamlined, automated processes (Ogundajo et al., 2022). The implementation of accounting software is thus a crucial element in modern financial management, shaping the efficiency, accuracy, and responsiveness of firms in managing their resources and planning for future operations (Olufemi et al., 2021). In this study, accounting software deployment was measured as the degree of accounting software intensity, calculated by dividing the cost of accounting software by total assets (Ndubuisi et al., 2024).

2.1.2 Corporate profitability

Corporate profitability refers to the ability of a business to generate earnings from its operations over a specific period relative to the costs incurred (Bolarinwa et al., 2021). It reflects the extent to which a firm can utilize its resources efficiently to produce revenue while controlling expenses. Profitability indicates the financial health of a business and serves as a measure of success in terms of achieving sustainable growth, providing returns to investors, and maintaining operational stability (Susan et al., 2022). Firms with high profitability are able to expand operations, invest in innovation, and withstand market fluctuations, demonstrating the capacity to convert resources into financial gains effectively.

Profitability is closely tied to the performance of a company's operational, financial, and strategic decisions (Ruhshona, 2025). It captures the outcome of revenue generation, cost management, pricing strategies, and investment choices. Organizations that maintain consistent profitability are better positioned to attract funding, retain skilled employees, and establish trust with stakeholders, all of which contribute to long-term viability. The measure of profitability goes beyond simple revenue generation, as it involves the relationship between income earned and resources used (Nworie & Nwoye, 2023). Evaluating profitability allows a company to understand how well it leverages its assets, labor, and capital to achieve financial objectives.

The presence of profitability within a business also affects decision-making and planning, influencing the allocation of resources to areas that can produce further returns. It serves as an indicator of efficiency and competitiveness, signaling how well a company is performing relative to peers and industry standards. Profitability allows managers to assess operational strengths and weaknesses, guiding strategies for growth, investment, and cost management (Masithoh, 2024). It represents a culmination of financial performance that enables businesses to maintain resilience in fluctuating market conditions and to sustain development over time. Firms that consistently achieve high profitability are positioned to maintain stability, meet obligations to shareholders, and invest in future opportunities, making it a critical measure of business success in any sector (Rashid, 2021). In this study, corporate profitability in this study was measured using earnings per share.

2.2 Theoretical Framework

The Technology Acceptance Model was developed by Fred Davis in 1986 as a way to explain how individuals come to adopt and use new technologies (Lee, 2021). The model was created in response to the growing need to understand user behavior in relation to information systems, particularly within organizational settings. Davis sought to provide a framework that could predict technology usage based on users' perceptions and attitudes, offering a systematic approach to studying how technological innovations are integrated into daily operations. Since

its introduction, the model has been widely applied in studies examining the adoption of various forms of technology in both business and academic contexts, demonstrating its versatility in explaining technology-related behaviour (Kumala et al., 2021).

The main postulations of the Technology Acceptance Model focus on two primary determinants of technology adoption: perceived usefulness and perceived ease of use (Hairah et al., 2021). Perceived usefulness refers to the degree to which a person believes that using a particular technology will enhance their job performance, while perceived ease of use captures the extent to which the individual believes that the technology can be used without effort. According to the model, these perceptions influence users' attitudes toward the technology, which in turn affects their intention to use it and ultimately determines actual usage behavior (Stănescu & Romaşcanu, 2021). The theory also recognizes that external factors, such as organizational support, prior experience, and training, can shape these perceptions and therefore influence adoption outcomes.

The relevance of the Technology Acceptance Model to this study lies in its ability to explain why accounting software is adopted by firms and how this adoption affects corporate profitability. Firms that perceive accounting software as useful for improving financial reporting, decision-making, and operational efficiency are more likely to invest in and integrate these systems into their operations. Similarly, if the software is easy to use and compatible with existing processes, employees are more likely to utilize it effectively, ensuring that the intended benefits are realized. By linking user perceptions to actual usage, the model provides a theoretical basis for understanding how the deployment of accounting software can enhance earnings per share and overall financial performance in industrial goods firms in Nigeria.

2.3 Empirical Review

Nwankwo et al. (2025) examined how automated accounting software influences the efficiency of financial operations in Nigerian small and medium-sized enterprises. The study aimed to determine the effect of automation on the accuracy, reliability, timeliness, and overall efficiency of financial reporting, while also identifying the challenges SMEs encounter when adopting such systems. Data were collected through a survey of 370 respondents from various SMEs across Nigeria, and the analysis employed both descriptive and inferential statistics. The results indicated that automated accounting software significantly improved the accuracy and reliability of financial reports, with mean scores of 4.20, t-statistic of 20.45, and p-value of 0.000, leading to the rejection of the null hypothesis. The study also found significant improvements in the timeliness and efficiency of financial operations, and it highlighted substantial challenges in adopting and implementing automated accounting software, confirming that SMEs face notable barriers in technological adoption.

Ndubuisi et al. (2024) investigated the impact of Accounting Information Systems on the financial performance of listed healthcare firms in Nigeria. The study focused on the effects of accounting software usage, software cost, and investment intensity on return on assets. An ex-post facto research design was used, targeting seven healthcare firms listed on the Nigerian Exchange Group, with five firms selected purposively based on the availability of consistent financial data from 2014 to 2023. Secondary data were drawn from ten years of annual reports, and analysis involved descriptive statistics and panel least squares regression with White

period standard errors at a 5% significance level. The findings showed that accounting software usage had a non-significant positive effect on return on assets, while the cost of software positively and significantly influenced return on assets, and investment intensity had a significant negative effect.

Nwekwo et al. (2024) studied the effect of accounting software on financial reporting in corporate organizations in Southeast Nigeria. The research aimed to examine the influence of enterprise resource planning software (ERP) and commercially available software (CAS) on financial reporting. A survey research design was adopted, using primary data collected through structured questionnaires with both multiple-choice and open-ended questions. Predictor variables were measured on a five-point Likert scale, and the Mann-Whitney test was applied to evaluate the results. The study revealed that both ERP and CAS had statistically significant effects on financial reporting, with coefficients of $U = 17.28$, $p < 0.05$ and $U = 18.004$, $p = 0.014$, respectively.

Rahahle et al. (2024) explored the effect of e-accounting systems on firm performance in Jordanian hypermarkets. Primary data were collected from 152 financial employees across 20 hypermarkets in Amman, achieving an 84.4% response rate. Structural equation modeling was used to analyze the data, revealing that system quality, information quality, and service quality within e-accounting systems positively and significantly influenced firm performance. The study recommended that managers select reputable e-accounting software vendors specializing in retail operations to ensure features such as inventory management and point-of-sale integration were fully accommodated.

Nworie et al. (2023) examined computerized accounting systems as a tool for improving operational performance of listed industrial goods firms in Nigeria. The study assessed how computerised accounting system intensity influenced operating expenses using an ex-post facto design. The population comprised thirteen listed industrial goods firms, with purposive sampling applied to select firms with complete annual reports from 2012 to 2021. Secondary data were analyzed using Ordinary Least Squares regression, revealing that higher intensity of computerized accounting systems significantly reduced operating expenses ($p = 0.0057$).

Ogundajo et al. (2022) investigated the use of accounting software in cost control among listed deposit money banks in Nigeria. A field survey using structured questionnaires targeted 120 respondents, with 107 valid responses retrieved. Reliability of the instrument was confirmed with a Cronbach's alpha of 0.967. Analysis using regression showed that software efficiency, reliability, ease of use, accuracy, and data quality significantly improved responsibility accounting ($R^2 = 0.600$, $F = 32.758$, $p = 0.000$) and activity-based costing ($R^2 = 0.810$, $F = 91.489$, $p = 0.000$). The study concluded that operational easiness and accuracy were key factors driving effective cost control through accounting software.

Izuchukwu and Nkiru (2022) assessed the effect of computerized accounting systems on organizational performance in oil and gas firms in Port Harcourt, Nigeria. Using a survey design, data were collected from 100 staff across five firms, focusing on Accounting/Finance and IT/ICT departments. Reliability was confirmed through Cronbach's alpha, and analysis used descriptive and inferential statistics with simple linear regression. The results showed a significant positive effect of accounting software on accountability, productivity, and cost control, prompting recommendations for adopting electronic and cloud-based solutions to safeguard financial data.

Nworie et al. (2022) investigated the influence of firm profitability, size, capital turnover, and liquidity on the level of accounting software adoption in listed manufacturing firms in Nigeria. An ex-post facto design was applied to 21 purposively selected firms from a population of 34 listed industrial and consumer goods firms. Secondary data from 2012 to 2021 were analyzed using Prais-Winsten regression. Results showed that firm size, capital turnover, and liquidity positively affected accounting software adoption, while profitability had no significant impact.

Olufemi et al. (2021) studied the effect of accounting software on corporate reporting quality. A cross-sectional survey collected primary data via structured questionnaires, validated using Cronbach's alpha. Multiple regression analysis revealed that accounting software significantly improved the reliability ($R = 0.594$, $\text{Adj. } R^2 = 0.627$, $F = 208.685$, $p < 0.05$) and accuracy ($R = 0.629$, $\text{Adj. } R^2 = 0.390$, $F = 80.180$, $p < 0.05$) of corporate reporting.

Chong and Nizam (2018) explored the impact of accounting software on the performance of Malaysian firms. The study highlighted that characteristics such as efficiency, reliability, ease of use, data quality, and accuracy influenced the use of accounting information systems, which in turn affected firm performance. Evidence suggested that effective use of accounting software enhances business operations, operational competency, and sustainability in competitive environments.

3.0 METHODOLOGY

This study adopted an ex-post facto research design, which was appropriate for examining the relationship between accounting software deployment and corporate profitability. The design was suitable because the variables of interest could not be manipulated by the researcher (Elom et al., 2025; Muojekwu et al., 2025), and the analysis focused on how historical accounting software adoption influenced earnings per share of industrial goods firms. The ex-post facto approach enabled the use of panel data covering multiple firms over a ten-year period, allowing for the observation of trends and patterns in financial performance over time.

The population comprised all twelve industrial goods firms listed on the Nigerian Exchange Group as of December 31, 2024.

Table 1: Population of the Study of industrial goods firms

1. Austin Laz & Company Plc.
2. Berger Paints Plc.
3. Beta Glass Plc.
4. Bua Cement Plc.
5. Cap Plc.
6. Cutix Plc.
7. Dangote Cement Plc.
8. Greif Nigeria Plc.
9. Lafarge Africa Plc.
10. Meyer Plc.
11. Premier Paints Plc.
12. Tripple Gee and Company Plc.

Source: Nigerian Exchange Group (2024)

Nine industrial goods firms were selected using purposive sampling. This approach was chosen to ensure that firms included had consistent and reliable financial data for the study period from 2015 to 2024. The selection criterion required that the firms had been actively listed and had available data throughout the study period. The selected firms were Austin Laz & Company Plc, Berger Paints Plc, Beta Glass Plc, Cap Plc, Cutix Plc, Dangote Cement Plc, Lafarge Africa Plc, Meyer Plc, and Tripple Gee and Company Plc.

Secondary data were obtained from the annual reports and audited financial statements of the selected firms. These documents provided information on accounting software costs, total assets, and earnings per share from 2015 to 2024. Secondary data were used due to their reliability, consistency, and public availability, allowing for accurate measurement of the variables under study.

Accounting software deployment was measured as the intensity of software usage, calculated by dividing the cost of accounting software by total assets. Corporate profitability was measured using earnings per share, reflecting the firm's ability to generate returns for shareholders. Firm size was added as a control variable and measured as natural log of total asset. The study specified a panel regression model to examine the effect of accounting software deployment on corporate profitability. The model (controlled by firm size) was expressed as:

$$EPS_{it} = \alpha_0 + \beta_1 ASD_{it} + \beta_2 FSZ_{it} + \mu_{it} \quad \text{---} \quad \text{eqi}$$

Where:

EPS_{it} = Earnings per share of firm i at time t

ASD_{it} = Accounting software intensity of firm i at time t

FSZ_{it} = Size firm i at time t

α_0 = Intercept

β_{1-2} = Coefficient of accounting software deployment

μ_{it} = Error term

Data analysis involved both descriptive and inferential statistics. Descriptive statistics summarized the data through measures such as mean, standard deviation, and range. Inferential analysis employed panel estimated Generalized Least Squares regression to test the hypothesis, chosen specifically to address cross-sectional dependence observed in the dataset. The analysis allowed the study to determine the effect of accounting software deployment on earnings per share while accounting for both firm-specific and time-specific variations. The null hypothesis was tested at a 5% significance level. It was rejected if the p-value of the regression coefficient for accounting software deployment was less than 0.05, indicating a significant effect on earnings per share. A p-value greater than 0.05 would indicate that the intensity of accounting software deployment did not significantly affect corporate profitability.

4.0 DATA ANALYSIS

4.1 Descriptive Analysis and Model Diagnostics

Table 2 Descriptive Statistics

	EPS	ASD	FSZ
Mean	4.674230	0.016210	7.218088
Median	0.820287	0.001536	6.707447
Maximum	60.87732	0.116565	9.715570
Minimum	-2.371621	0.000000	6.114804

Std. Dev.	9.118046	0.031859	1.089848
Skewness	3.439839	2.277268	0.917760
Kurtosis	18.34788	6.710277	2.361682
Jarque-Bera	1060.828	129.4123	14.16220
Probability	0.000000	0.000000	0.000841
Sum	420.6807	1.458880	649.6279
Sum Sq. Dev.	7399.350	0.090336	105.7114
Observations	90	90	90

Source: Eviews 10 Output (2025)

The earnings per share (EPS) variable in Table 2 shows an average of 4.674, indicating that, on average, the sampled industrial goods firms generated about 4.67 units of earnings per share over the 90 observations. The maximum EPS reached 60.88, while the minimum was -2.37, revealing a wide range of profitability across firms. The standard deviation of 9.12 highlights substantial variation around the mean, suggesting that EPS values are dispersed and not tightly clustered. The skewness of 3.44 indicates that the distribution is highly positively skewed, meaning that a few firms reported exceptionally high EPS values, pulling the distribution to the right. The kurtosis value of 18.35 reflects a leptokurtic distribution, with heavy tails and extreme outliers compared to a normal distribution. The Jarque-Bera probability of 0.000 confirms that EPS does not follow a normal distribution; however, the central limit theorem allows for inference because the sample size of 90 is sufficiently large to approximate normality for statistical analysis.

Accounting software deployment (ASD) has a mean value of 0.016 in Table 2, showing that, on average, the firms allocated about 1.6% of their total assets to accounting software. The maximum observed ASD is 0.116, and the minimum is 0, suggesting that while some firms invested substantially in accounting software, others did not invest at all during the period under study. The standard deviation of 0.0319 indicates modest variability around the mean, with most firms' software intensity relatively close to the average. The skewness of 2.28 suggests a strong positive skew, reflecting that a small number of firms had exceptionally high software intensity. The kurtosis of 6.71 points to a distribution with heavier tails and more extreme values than a normal distribution. The Jarque-Bera probability of 0.000 confirms that ASD is not normally distributed, but with 90 observations, the central limit theorem justifies the use of inferential statistics.

Firm size (FSZ), measured as the natural log of total assets, has a mean of 7.22 in Table 2, indicating that the average firm's total assets are around 1,350 in actual value when reversed from the logarithmic transformation. The maximum value of 9.72 and the minimum of 6.11 show a considerable spread in firm sizes among the sample. The standard deviation of 1.09 reflects moderate variation around the mean, suggesting that most firms are relatively close in size, with a few outliers. The skewness of 0.92 indicates a mild positive skew, meaning the distribution leans slightly toward larger firms, but not excessively so. Kurtosis of 2.36 suggests that the distribution is slightly platykurtic, with lighter tails and fewer extreme values than a normal distribution. The Jarque-Bera probability of 0.000841 confirms the distribution deviates from normality, but the sample size of 90 allows the central limit theorem to support valid statistical inference for regression or hypothesis testing.

Table 3 Cross-sectional Dependence

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in residuals

Equation: Untitled

Periods included: 10

Cross-sections included: 9

Total panel observations: 90

Note: non-zero cross-section means detected in data

Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	96.26314	36	0.0000
Pesaran scaled LM	7.102079		0.0000

Source: Eviews 10 Output (2025)

Table 3 presents the results of the Cross-Sectional Dependence test, which examines whether the residuals from the panel regression are correlated across firms. The essence of this test is to detect whether shocks or unobserved factors in one firm affect other firms in the panel, which, if present, violates the assumption of independence and may bias standard errors in conventional panel estimations. The Breusch-Pagan LM statistic of 96.26 with a probability of 0.0000 indicates that the null hypothesis of no cross-sectional dependence is rejected. This means that the residuals are significantly correlated across the nine sampled industrial goods firms, highlighting the need to account for cross-sectional dependence in the regression analysis, which justifies the use of panel estimated Generalized Least Squares in the study.

4.2 Test of Hypothesis

H₀: The intensity of accounting software deployment does not significantly affect the earnings per share of listed industrial goods firms in Nigeria.

Table 4 Test of Hypothesis

Dependent Variable: EPS

Method: Panel EGLS (Cross-section weights)

Date: 11/01/25 Time: 04:20

Sample: 2015 2024

Periods included: 10

Cross-sections included: 9

Total panel (balanced) observations: 90

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASD	7.846456	2.812740	2.789613	0.0065
FSZ	3.995772	0.415155	9.624766	0.0000
C	-25.56652	2.775460	-9.211633	0.0000

Weighted Statistics

R-squared	0.576943	Mean dependent var	5.854627
Adjusted R-squared	0.567217	S.D. dependent var	6.878322
S.E. of regression	5.445969	Sum squared resid	2580.296
F-statistic	59.32294	Durbin-Watson stat	1.621015
Prob(F-statistic)	0.000000		

Source: Eviews 10 Output (2025)

Table 4 presents the results of the panel estimated Generalized Least Squares regression used to test the effect of accounting software deployment on earnings per share (EPS) among listed industrial goods firms in Nigeria. The weighted statistics show an adjusted R-squared of 0.567, which indicates that approximately 56.7% of the variation in EPS is explained by the model, reflecting a moderately strong explanatory power. The Durbin-Watson statistic of 1.621 suggests that there is no severe autocorrelation in the residuals, supporting the reliability of the coefficient estimates. The Prob(F-statistic) of 0.000 confirms that the overall model is statistically significant at the 5% level, meaning the set of regressors, including accounting software deployment and firm size, collectively explain variations in EPS better than a model with no predictors.

The constant term, C, has a coefficient of -25.567 with a p-value of 0.000, which is statistically significant at the 5% level. This indicates that if both accounting software deployment and firm size were zero, the EPS would be negative 25.567 units. While the constant itself is not directly of interest in practical terms, its significance confirms that the regression line does not pass through zero arbitrarily and that the model intercept is meaningful in predicting EPS.

Accounting software deployment (ASD) has a positive coefficient of 7.846 with a p-value of 0.0065, indicating a statistically significant effect on EPS at the 5% level. This coefficient implies that for each one-unit increase in the intensity of accounting software deployment, the earnings per share of listed industrial goods firms increase by 7.846 units, holding firm size constant. The positive effect suggests that higher investment and use of accounting software are associated with greater profitability, confirming that software deployment directly contributes to improvements in EPS. Therefore, the null hypothesis, which stated that accounting software deployment does not significantly affect EPS, is rejected.

The control variable, firm size (FSZ), also shows a positive and significant effect on EPS with a coefficient of 3.996 and a p-value of 0.000. This indicates that a one-unit increase in the natural logarithm of total assets is associated with an increase of approximately 3.996 units in EPS, holding accounting software deployment constant. The finding suggests that larger firms, likely benefiting from economies of scale and more extensive resources, tend to achieve higher earnings per share, reinforcing the importance of firm size as a determinant of profitability in the industrial goods sector.

4.3 Discussion of Finding

The positive and significant effect of accounting software deployment on earnings per share suggests that firms that invest more in accounting technology are able to convert technological inputs into higher profitability. This result can be attributed to the ability of intensive software deployment to improve the accuracy, timeliness, and reliability of financial information, which

strengthens managerial decision-making and resource allocation, ultimately boosting shareholder returns. The finding aligns with Nwankwo et al. (2025), who reported that automated accounting software enhances the efficiency and reliability of financial operations in Nigerian SMEs. Similarly, Nwekwo et al. (2024) found that both ERP and commercially available accounting software significantly improve financial reporting, reinforcing the idea that robust software usage leads to better financial outcomes. Rahahle et al. (2024) also support this outcome, showing that system quality and information accuracy in e-accounting systems positively influence firm performance in Jordanian hypermarkets. Furthermore, Nworie et al. (2023) found that higher computerized accounting system intensity reduces operating expenses in Nigerian industrial goods firms, suggesting that efficient software deployment translates operational savings into improved earnings per share. These studies collectively indicate that the more intensively firms deploy accounting software, the greater the positive effect on profitability, highlighting the role of technology in enhancing both operational efficiency and financial performance.

5.1 CONCLUSION AND RECOMMENDATION

The finding that the intensity of accounting software deployment positively and significantly affects earnings per share indicates that firms' strategic investment in technology can enhance financial performance in measurable ways. Firms that integrate and utilize accounting software more intensively are able to streamline financial processes, reduce errors, and provide more timely and accurate information for decision-making, which translates into improved profitability reflected in higher earnings per share. This relationship highlights the importance of technological tools in shaping corporate efficiency and financial outcomes, demonstrating that software adoption is not merely a support function but a driver of value creation. The result also highlights how operational and financial management systems can interact with firm resources to strengthen performance, suggesting that the quality and intensity of technological integration play a critical role in determining returns to shareholders. This highlights the broader significance of technology in modern corporate management practices.

Given that the intensity of accounting software deployment has a positive and significant effect on earnings per share, it is recommended that the management of listed industrial goods firms in Nigeria actively invest in and expand the use of advanced accounting software across all financial operations. By doing so, management can ensure more accurate, timely, and efficient financial reporting, which directly contributes to improving profitability. Firms should also provide adequate training and support to accounting staff to fully leverage the capabilities of the software, enabling better decision-making and enhanced shareholder value. This approach will allow the organizations to maximize returns from their technology investments and strengthen their competitive position in the industrial goods sector.

5.2 Contribution to Knowledge

This study contributes to the literature by addressing the gaps in understanding the relationship between accounting software deployment and corporate profitability in listed industrial goods firms in Nigeria. Unlike previous research that focused on SMEs (Nwankwo et al., 2025), healthcare firms (Ndubuisi et al., 2024), oil and gas firms (Izuchukwu & Nkiru, 2022), banks (Ogundajo et al., 2022), or international contexts such as Malaysia (Chong & Nizam, 2018) and Jordan (Rahahle et al., 2024), this study specifically examined the direct effect of

accounting software intensity on earnings per share in the industrial goods sector. It expands the scope of empirical evidence by linking software deployment to shareholder returns, rather than limiting the analysis to operational efficiency, cost control, or reporting quality. By using ten years of panel data from nine purposively sampled firms and applying panel estimated Generalized Least Squares regression to account for cross-sectional dependence, the study provides robust and sector-specific hints into how the intensity of accounting software usage influences corporate profitability. The findings offer new evidence on the financial impact of technology adoption in a key sector of the Nigerian economy, thereby filling an important gap in the existing body of research.

5.3 Limitations of the Study and Suggestion for Further Studies

A limitation of this study was the focus on only nine listed industrial goods firms in Nigeria, which may limit the generalizability of the findings to other sectors or unlisted firms. The study relied entirely on secondary data from audited financial reports, which might not capture all qualitative aspects of accounting software usage, such as staff training, user attitudes, or informal practices. Additionally, the study measured corporate profitability only through earnings per share, which may not reflect other important financial performance indicators. Time constraints and data availability for the 2015 to 2024 period also restricted the scope of analysis.

For further studies, researchers could expand the scope to include more firms across different sectors to provide a broader understanding of accounting software deployment and profitability. Future studies could combine secondary data with primary data, such as surveys or interviews, to capture qualitative factors like user experience, training, and software integration challenges. Researchers could also explore other measures of profitability and financial performance, such as return on assets, return on equity, or cash flow, to provide a more comprehensive assessment of the impact of accounting software on firm performance.

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