

Human Resource Accounting Practices and Corporate Performance of The Listed Manufacturing Companies in Nigeria

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Abstract

This study examines the effect of Human Resource Accounting (HRA) practices on the corporate performance of listed manufacturing companies in Nigeria between 2013 and 2022. Corporate performance was assessed using Return on Equity (ROE), Return on Capital Employed (ROCE), Return on Assets (ROA), and Earnings Per Share (EPS) as dependent variables. The independent variables include the Historical Cost, Replacement Cost, Opportunity Cost, and Economic Value Approaches to HRA. Firm Size, Firm Age, Ownership Structure, and Audit Quality were included as control variables. Using a mixed-method approach combining survey research and ex-post facto design, the study employed both primary and secondary data. Regression results show that HRA practices significantly influence corporate performance, with the Historical Cost Approach demonstrating the strongest positive effect. However, performance trends over the ten years were inconsistent, indicating a lack of strategic alignment between human capital investment and performance outcomes. Guided by Human Capital Theory, Stakeholder Theory, and the Resource-Based View (RBV), the study highlights the critical role of human capital as a strategic and reportable resource. Beyond manufacturing, the findings apply to sectors such as banking, telecommunications, healthcare, and education. The study also compares international best practices, notably IFRS-aligned disclosures in India, South Africa, and the European Union. It recommends the adoption of IFRS-compliant frameworks, especially IAS 19, IAS 38, IFRS 13, and ISSB S1/S2—alongside a national capacity-building program/training for accounting and Human Resource Practitioners. This will strengthen human capital reporting, improve governance, and enhance investor confidence in Nigeria's manufacturing and broader economic sectors.

Keywords: Human Resource; Human Resource Accounting; Corporate Performance; Manufacturing Companies.

1. Introduction

For large organisations, particularly manufacturing companies, to function effectively, achieve optimal corporate performance, and ensure long-term sustainability, significant investment in human capital development is essential. Surprisingly, limited research has explored how organisations implement human resource accounting (HRA) practices and how these practices are perceived across departments.

This study investigates the link between HRA practices and corporate performance by surveying internal stakeholders (e.g., HR departments, accounting staff, internal audit units, and board members) and external stakeholders (e.g., professional accounting bodies, the Financial Reporting Council of Nigeria [FRCN], and the Nigerian Exchange Group [NGX]) to assess their views on HRA practices among listed manufacturing firms in Nigeria.

Human Resource Accounting (HRA) refers to the process of identifying and reporting investments made in the human capital of an organisation, which contributes to future earnings (Omodero et al., 2016). Unlike traditional accounting, which records personnel expenses in the income statement, HRA recognizes such costs as assets in the statement of financial position (Olowolaju & Oluwaseun, 2016). The measurement of human capital is increasingly seen as critical to organisational decision-making (Kanade & Harwani, 2018).

While the United States pioneered HRA, its adoption has extended globally (Oluwagbemiga, 2021). In the early 21st century, U.S. Generally Accepted Accounting Principles (GAAP) began shifting away from strict historical cost approaches toward more complex asset valuation methods (Chen, 2022). Concurrently, the global move towards International Financial Reporting Standards (IFRS) reflects openness to alternative valuation frameworks, including HRA (Illiemena, 2020).

Professionals in accounting and financial reporting are gradually adapting to these changes, incorporating HRA models like the replacement cost, opportunity cost, and economic value approaches (Bello & Micah, 2021; Bonsu et al., 2019).

Debates persist around the classification of human capital as an asset. An asset is traditionally defined as a resource obtained through past transactions and expected to yield future economic benefits (Zhang et al., 2022). Critics argue that people cannot be owned and may leave at will, making human capital difficult to quantify (Zhong et al., 2017). Proponents, however, emphasize the strategic value of skilled managers and employees, whose contributions often surpass those of physical assets (Tortorella et al., 2019).

Organizations rely heavily on skilled, knowledgeable, and motivated personnel, whose competencies cannot be replaced by machines. Hence, it is imperative to value human assets comparably to other organizational assets (Zhang et al., 2022).

Globally, the emphasis on scientific management and quantitative efficiency has spurred HRA adoption across countries such as India, Indonesia, Malaysia, Vietnam, the Philippines, Thailand, and South Africa (Wiyadi et al., 2021; Sanghani, 2016). In Nigeria, treating recruitment and training costs as current expenses contradicts the matching principle in accounting. These costs should instead be capitalized and amortized over the service life of the employees (Tortorella et al., 2019; Queiroz et al., 2021).

While physical assets such as land, equipment, and buildings are essential for organisational functions, they become ineffective without human input (Qin et al., 2016). Human capital initiates and drives strategic actions, ensuring productivity, profitability, and efficiency (Wiyadi et al., 2021).

Empirical research indicates that knowledge- and skill-intensive firms outperform those relying solely on physical or financial assets (Zhang et al., 2022). Employee attributes such as behavior, values, and knowledge directly influence organisational efficiency and profitability (Tortorella et al., 2019). HRA practices, therefore, must align with the company's core objective—profitability—across departments.

A coherent HRA approach fosters a strong organisational culture, reflected in shared values and tangible behaviors (Saucedo-Martínez et al., 2018; Zezulka et al., 2016). Studies in developing countries suggest that investment in human capital correlates with enhanced organizational performance through cultural cohesion and productivity (Sarker, 2016; Sanghani, 2016).

Nonetheless, high labour turnover and manpower needs in manufacturing pose challenges to consistent HRA implementation (Zezulka et al., 2016). Departmental divergence in HRA perspectives can lead to organisational inefficiencies (Sarker, 2016). This research thus addresses the gap in stakeholder perceptions of HRA in developing economies, focusing on the correlation between HRA practices and corporate performance in Nigerian manufacturing companies. It emphasizes capitalizing human resource investments rather than expensing them—a practice increasingly aligned with international standards (e.g., IFRS S1/S2 -ISSB Standards, IFRS 13, IFRS 38).

2. Literature review

2.1. Human resources

The term "human resources" typically refers to the individuals who make up an organization's workforce. In labour economics, however, it may also describe broader economic groups such as industries or entire nations (Abubakar, 2011). Within organisations, the term also denotes the department responsible for overseeing employee-related strategies and policies—commonly known as "Human Resources" or simply "HR."

The concept of human resources as a formal management term gained prominence in the 1960s, during a period marked by heightened global awareness of human rights, particularly in the context of the Vietnam War (Abubakar, 2011). The HR function itself evolved from earlier business practices such as welfare and scientific management. Initially, it served mainly administrative purposes under the "personnel function," but over time—particularly in the United States and among global corporations—HR has come to be seen as a strategic, data-driven approach to managing talent. This evolution aims to boost productivity and competitiveness in markets increasingly reliant on a limited pool of highly skilled workers (Abubakar, 2011).

Over the years, human resources have come to be recognized as critical organizational assets capable of creating significant value. For firms to gain a competitive edge, they must view their workforce as a strategic resource. Enhancing employee productivity to add organizational value is now a key business priority. To fully leverage their workforce, organizations must invest in strong human resource development programs—not only to meet business goals but also to ensure long-term growth and survival. This entails significant investment in developing employees' knowledge, skills, and competencies to compete in today's dynamic global market. In more advanced economies, HR is acknowledged as a vital competitive advantage. As the emphasis on knowledge intensifies, many organizations increasingly regard employees as valuable assets worthy of substantial development investment (Prince, Lucky, & Kingsley, 2013).

Despite its recognized value, human resources are rarely reflected as assets in financial reports. This is mainly due to recognition criteria for intangible assets, which require measurable cost and probable future economic benefit. Since HR generally fails to meet both conditions, it is excluded from the statement of financial position (Prince et al., 2013). Nonetheless, data about workforce composition and development remain important to stakeholders such as financial analysts and investors. These groups depend on such information to evaluate a firm's long-term prospects, economic value, and viability. In many cases, the quality of human capital directly influences organisational performance and market competitiveness.

2.2. Human resources as an asset

Although financial statements typically recognize assets like land, capital, and entrepreneurial resources, workforce-related expenditures are often treated as recurring costs. However, employees are arguably the most valuable assets of any organisation. Human Resource Accounting (HRA) recommends treating human capital similarly to physical assets, justifying long-term investments aimed at enhancing productivity. These include training and development expenditures, which under HRA should be capitalized and amortized over the expected duration of employee tenure, while accounting for turnover and performance decline (Abubakar, 2011).

Recognizing employees as assets supports more accurate and consistent financial reporting, improves managerial decision-making, and enables more efficient resource allocation. It also enhances reported profits, as HR investments would be amortized over several years rather than fully expensed immediately, preventing undue reductions in profitability.

2.3. Human resource accounting (HRA)

Human Resource Accounting (HRA) is an accounting framework that recognizes both employees and managers as key organizational assets capable of generating future economic value. In contrast to traditional accounting practices—which treat HR expenditures as expenses that reduce reported profits—HRA capitalizes these expenditures as assets listed in the statement of financial position (Institute of Chartered Accountants of India [ICAI], 2015).

Human capital is more essential than other assets in ensuring high productivity and performance. Nonetheless, traditional financial reporting fails to fully capture or reflect this importance. Although HR is acknowledged as valuable, it is not formally disclosed in financial statements. This omission hinders effective decision-making. HRA offers insight into the financial implications of workforce-related

policies and strategies. The increasing demand for detailed human resource data has spurred the development of HRA as a unique area of accounting.

HRA tracks organizational investments in employees and the evolution of their value—often enhanced through training and experience (ICAI, 2015). It helps measure the economic value of human resources, supports informed managerial decisions, and provides a framework for valuing workforce assets similarly to physical ones. While still evolving, HRA has gained considerable academic and professional interest, leading to the development of various valuation models and theoretical approaches (Shadhin, 2019).

2.4. Corporate performance

Corporate performance refers to the extent to which an organization achieves its objectives, typically measured through profitability, efficiency, and growth. Common financial indicators include net profit, earnings per share, asset utilization, and shareholder value (Iliemena & Okolocha, 2019).

Performance evaluation helps stakeholders assess management's effectiveness and the firm's overall health. Metrics such as profit margins, revenue growth, return on assets (ROA), return on equity (ROE), liquidity ratios, and market share are commonly used. In this study, corporate performance is measured using Earnings Per Share (EPS), Return on Assets (ROA), and Return on Capital Employed (ROCE) indicators that capture accounting, operational, and investor perspectives.

According to Iliemena and Amedu (2019), the sustainability of Nigerian manufacturing firms depends heavily on managerial efficiency, which in turn relies on cost control and profitability. These performance outcomes can be influenced significantly by structured HR strategies such as HRA practices.

2.5. Cross-sectoral relevance of human resource accounting

Looking at Cross-Sectoral and International Relevance of Human Resource Accounting, it cuts across all sectors and economies where human derives value creation. For example, in the education sector, academic output is directly linked to intellectual investments. In the Healthcare sector, valuing medical personnel and staff development brings about efficiency. In the telecommunications sector, transformational innovation depends mostly on knowledge-based workers. In the banking sector, employee training compliance has a desirable effect on operational risk (Udeh et al, 2022), just to mention a few.

2.6. Global trend / international relevance of human resource accounting

Internationally, countries adopt HRA under broader frameworks. For example, in India, companies like Infosys, Tata Steel voluntarily report Human Capital metrics (Rao & Sharma, 2021). National Standards promote Environmental, Social, and Governance (ESG)-Aligned workforce reporting in Brazil and Malaysia. In the European Union, Directive 2014/95/EU mandates workforce disclosure, and King IV governance codes emphasize integrated reporting, including Human capital in South Africa (EY, 2022), just to mention a few.

2.7. International standard (IFRS/IAS) integration to HRA

The following standards are part of ongoing reforms in ESG reporting and integrated reporting frameworks worldwide. Their relevance to HRA could be tabulated below:

IFRS / IAS STANDARD	RELEVANCE TO HRA
IFRS 2 – Share-Based Payment	This captures employee incentive schemes as equity expenses.
IFRS 13 – Fair Value Measurement	It guides on non-financial asset valuation, applicable to human resources.
IFRS S1 & S2 (ISSB, 2023)	It mandates workforce metrics under sustainability disclosures.
IAS 19 – Employee Benefits	It measures short- and long-term employee-related obligations.
IAS 38 – Intangible Assets	Training and development costs may be capitalized under specific conditions.

Source: (IFRS Foundation, 2023).

2.8. Stakeholders' viewpoints on HRA vs traditional accounting

Views of different stakeholders on HRA vs Traditional Accounting could be tabulated below:

Stakeholders	Views on HRA vs Traditional Accounting
Managers	They value practical approaches like historical Cost, but are reluctant its implement it because of the cost implications.
Employees	They are encouraged when human capital is recognized and valued in reports.
Investors	They want disclosures on human capital investments, especially ESG-related.
Relevant Professionals	Require objective/standardized models to reduce valuation subjectivity.
Regulators	Desire consistency and comparability with global benchmarks.

2.9. Discussion on resolving stakeholders' disagreement

For stakeholders' disagreement to be resolved, a global standard that will take care of uniformity, consistency, moderate implementation cost, objectivity, and clear disclosure must be available for adoption by countries around the globe.

2.10. Causes of corporate performance instability

Corporate performance instability refers to inconsistent or fluctuating organizational outcomes (financial and operational) over time, often undermining long-term value creation. Drawing on the Resource-Based View (RBV), which emphasizes internal capabilities such as human capital as strategic assets (Barney, 1991), instability could be caused by both endogenous (internal inefficiencies) and exogenous factors (external factors) that erode these capabilities. Key causes of corporate performance instability are below:

- 1) High Employee Turnover: Persistent voluntary exit of workforce from firms results in skills/knowledge loss, increased hiring costs, and reduced team cohesion, all of which weaken performance continuity/ improvement (Harris et al., 2023).

- 2) Inadequate Training: lack of adequate training for knowledge/skills acquisition by the work workforce undermines adaptability and innovation, particularly in competitive and technologically dynamic sectors (Obi & Akpan, 2022).
- 3) Leadership Volatility: Regular changes in executive leadership or weak corporate governance adversely affect strategic alignment, decision-making processes, and policy continuity. (Al-Matari et al., 2021).
- 4) Macroeconomic Instability: Exchange rate fluctuations, inflation, and political uncertainty are external factors that directly impact production costs and market access (Okoro & Mensah, 2023).
- 5) Technological Disruption: Firms unable to achieve technological innovation with internal resources face structural disadvantages, leading to performance volatility (Zhou et al., 2022).

2.11. Theoretical review

This study is grounded in below theories:

2.11.1. Human capital theory

Human Capital Theory which posits that human capital is a key driver of economic and organisational performance across industries. Although the concept originated with Adam Smith in the 18th century, it was later formalized by Gary Becker and Theodore Shultz in the 1950s and 1960s. The theory emphasizes the value of education, training, and experience in enhancing individual and organizational productivity (Health et al., 2021).

A core element of Human Capital Theory is intellectual capital, encompassing employee knowledge, expertise, skills, and proprietary know-how—attributes that confer competitive advantage. Investment in human resources, such as hiring, training, and ongoing development, is seen as yielding future returns.

According to Bassey and Tapang (2012), human capital investment includes all expenditure aimed at fostering positive employee behaviors, including motivation, supervision, and continuous learning. Organizations that invest in workforce competencies anticipate future gains. It is also essential for firms to ensure that acquired knowledge and skills remain within the organisation and are not lost to competitors.

The strength of the theory lies in its ability to link education and training to increased productivity and earnings. However, it has limitations such as oversimplification and failure to account for income disparities or the complex nature of human behavior (Marginson, 2019).

This theory underpins the relevance of HRA by justifying the capitalization of HR-related expenditures. It provides a theoretical lens through which to assess how workforce investment contributes to firm performance.

2.11.2. Stakeholder theory

Stakeholder Theory (Freeman, 1984) posits that organizations should create value for all stakeholders. HRA supports this by providing transparency about how companies invest in their employees—benefiting not just shareholders but also employees, regulators, and society.

2.11.3. Resource-based view

Resource-Based View (RBV) (Barney, 1991) emphasizes that human capital, if valuable, rare, inimitable, and non-substitutable, constitutes a source of sustained competitive advantage. Therefore, recording human resources as assets is both theoretically justified and strategically necessary.

3. Methodology

To examine the effect of Human Resource Accounting (HRA) on the corporate performance of listed manufacturing companies in Nigeria, a mixed-method approach was adopted. This involved a combination of survey research design and ex-post facto design, utilizing both quantitative and qualitative methods for data collection and analysis.

Primary and secondary data were employed. Secondary data, primarily related to dependent and control variables, were extracted from audited financial statements and annual reports of quoted manufacturing firms, Nigerian Stock Exchange factbooks, and National Bureau of Statistics bulletins over ten years (2013–2022). Primary data were collected directly from respondents using a structured, closed-ended questionnaire based on a 5-point Likert scale.

3.1. Questionnaire design

The questionnaire was organized into three main parts: the first captured demographic details and background information of respondents; the second gathered data on various human resource accounting practices from the viewpoint of the listed manufacturing firms; and the third obtained feedback from external parties such as the Nigerian Exchange Group, Financial Reporting Council of Nigeria, and recognized professional accounting bodies.

3.2. Validity of the questionnaire

The questionnaire contents were developed in conjunction with specialists in the field of study for their input on the adequacy, face, and content validity, and the appropriateness of the items in the instrument. By their experience-based suggestions and criticism, the questionnaire was certain to be a valid survey instrument. It was certain that questions were fit to measure the theoretical constructs (like HRA and Corporate Performance with the help of models and proxies to be assessed with the use of factor analysis. A pilot survey was carried out in a small sample group before the final survey in the entire sample population.

3.3. Model specification

The models below describe the linear relationships between Human Resource Accounting practices, corporate performance, and control variables. These models were adapted from Oluwagbemiga (2021). The original model is:

$$CP = \beta_0 + \beta_1 HRA + \beta_2 RegV + \beta_3 CV + \mu \quad (1)$$

Following Iliemena and Okolocha (2019), Human Resource Accounting practices were decomposed into Historical Cost Approach (HCA), Replacement Cost Approach (RCA), Opportunity Cost Approach (OCA), and Economic Value Approach (EVA). Corporate performance was measured using Return on Capital Employed (ROCE), Return on Assets (ROA), and Earnings Per Share (EPS). The adapted models are:

$$ROCE_{it} = \beta_0_{it} + \beta_1 HCA_{it} + \beta_2 RCA_{it} + \beta_3 OCA_{it} + \beta_4 EVA_{it} + \mu \quad (2)$$

$$ROA_{it} = \beta_0_{it} + \beta_1 HCA_{it} + \beta_2 RCA_{it} + \beta_3 OCA_{it} + \beta_4 EVA_{it} + \mu \quad (3)$$

$$EPS_{it} = \beta_0_{it} + \beta_1 HCA_{it} + \beta_2 RCA_{it} + \beta_3 OCA_{it} + \beta_4 EVA_{it} + \mu \quad (4)$$

Where

ROCE = Return on capital employed

ROA = Return on assets

EPS = Earnings per share

HCA = Historical cost approach

RCA = Replacement cost approach

OCA = Opportunity cost approach

EVA = Economic value approach

3.4. Methods of data analysis

Data from the questionnaires were compiled using Microsoft Excel and analyzed using SPSS version 23.0. Descriptive statistics included percentages, mean, median, mode, and standard deviation. For inferential analysis, unbalanced panel regression was conducted, as the dependent and independent variables did not have equal observations across firms and years.

The effect of Human Resource Accounting practices on corporate performance was analyzed through regression models. The significance of the models was assessed at a 95% confidence level. P-values of the F-statistics were used to evaluate model robustness. A p-value less than 0.05 indicated statistical significance.

4. Results and discussion

4.1. Questionnaire response rate

This section presents the response rate for the survey conducted among the stakeholders in manufacturing activities in Nigeria. In this survey, four categories of respondents were selected: 66 listed manufacturing companies, professional accountants' groups (ICAN, ACCA, and ANAN), the Financial Reporting Council of Nigeria, and the Nigerian exchange group. From each organization, 4 respondents were drawn, which brings the total respondents to three hundred (300). After three repeated administrations, out of the 300 copies of the questionnaire distributed, 257 copies were returned. Of these 257 copies, only 252 copies, representing approximately 84% of the sample, were found useful for data analysis. In line with the extant literature on human resources accounting and firm performance, 84% represents a significant milestone as none of the previous studies in the empirical literature for this study retrieved up to 84%. For instance, Asein et al (2019) retrieved 61% in a study on the implications of human resource accounting on human capital measurement in financial reports in Nigeria. Similarly, Atoyebi et al (2021) reported a 49% response rate in a study on the influence of human resources accounting on the performance of Nigeria's listed consumer goods services. According to Abdi et al (2020), a response rate of 45% is adequate, while a response rate of 60% and 70% represent good and excellent surveys, respectively. It should also be noted that the 252 respondents who participated were well distributed across the 4 stakeholder groups because no group returned less than 50% of the copies distributed to them.

Table 4.1: Questionnaire Response Rate

Department	Distributed		Retrieved	Percentage	
Manufacturing firms	264		226	85.6	
Professional Accountants	16		12	68.8	
Financial Reporting Council	8		5	62.5	
Nigeria exchange group		12	9	75.0	
Total		300	252	84.0	

4.2. Respondents' demographic rate

This section presents the summary and analysis of the demographic details of the 252 respondents who participated in the study. The analysis was based on the data gathered from the completed and returned questionnaires. Key demographic variables considered include work experience, job position, professional and educational qualifications, and gender. The findings were illustrated using Figures 1 through 5.

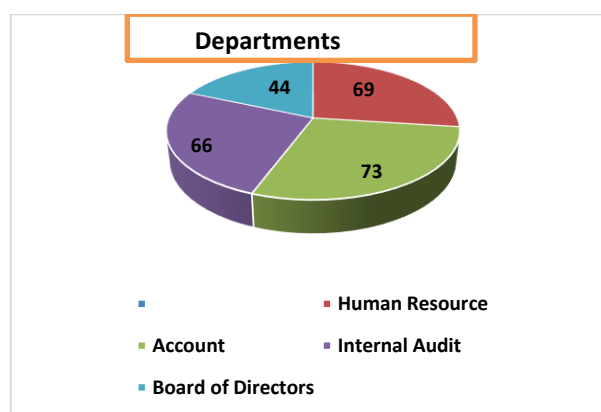


Fig. 4.1: Distribution of Respondents According to Departments.

Figure 4.1 shows the distribution of the respondents according to their departments and units in the organisation. As can be seen above, most of the respondents are from the finance/accounts department, with 73 respondents, closely followed by the human resources department, where 69 staff participated in the survey. We also obtained 66 valid responses from the internal audit unit, while the lowest turnout was from the board of directors and/ chairman.

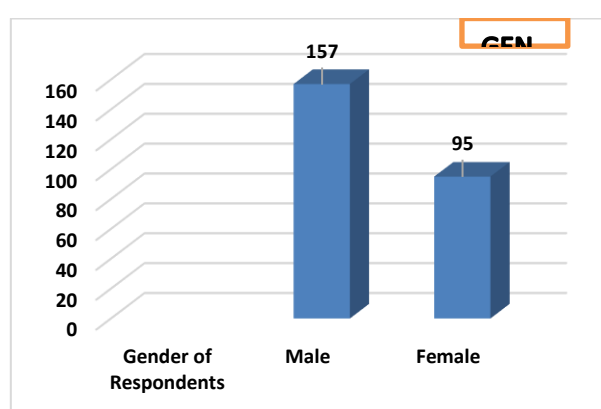


Fig. 4.2: Distribution of Respondents According to Gender.

The analysis presented in Figure 4.2 above shows that out of the total respondents, 157 individuals (62.3%) were male, while 95 individuals (37.7%) were female. This suggests that male employees may outnumber their female counterparts within the workforce of listed manufacturing firms in Nigeria. This pattern may reflect a broader trend in the staffing composition of such companies across the country. However, caution should be taken in making this generalization since there are 48 respondents who refused to participate, which may skew the sample towards a particular gender. Also, the use of non-probability sampling techniques adopted for reasons earlier stated may favour a particular gender. This result aligns with those of Fowzin and Narsin (2011), who reported a staff mix of 57.41% and 42.62% male and female, respectively, for a study using data from Nigerian listed manufacturing firms.

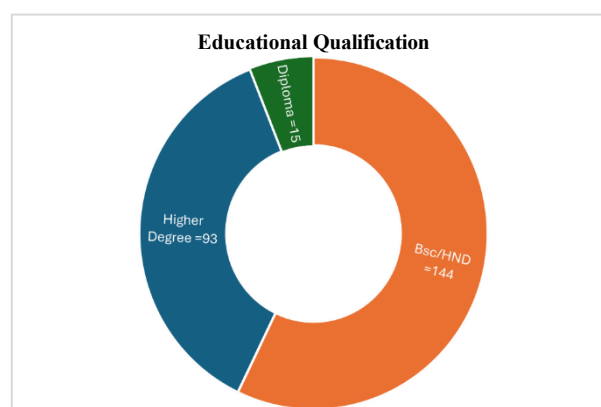


Fig. 4.3: Distribution of Respondents According to Educational Qualification.

In addition, the data on respondents' educational backgrounds displayed in Figure 4.3 indicates that 144 individuals, representing 57.14%, held a degree or higher diploma (such as a Higher National Diploma or Bachelor of Science) as their highest level of education. Meanwhile, 93 respondents (36.9%) obtained postgraduate degrees, like a Master of Business Administration or Master of Science, and only 15 respondents (5.95%) reported holding a diploma or certificate as their top qualification. These findings suggest that most of the respondents had sufficient educational backgrounds to comprehend the questionnaire and provide accurate, informed responses. This outcome aligns with the findings of Echobu et al. (2017), who carried out a related study using primary data collected from listed manufacturing firms in Tanzania.

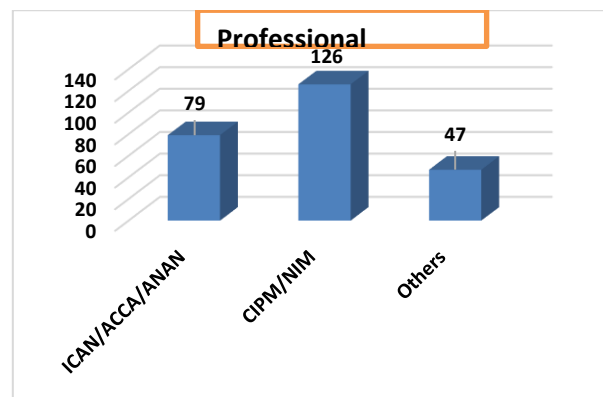


Fig. 4.4: Distribution of Respondents According to Professional Qualification.

Again, for the respondent's professional qualification, the statistics show that 79 (31.35%) of the respondents possessed a professional qualification in accounting (ACA/ACCA/ANAN), while most of the respondents, 126, representing about 50.0% of the respondents, are members of the Chartered Institute of Personnel Management or the Nigerian Institute of Management. The remaining 47 (18.65%) respondents belong to the other professional bodies not classified in this study. The results can be found in Figure 4.4 above.

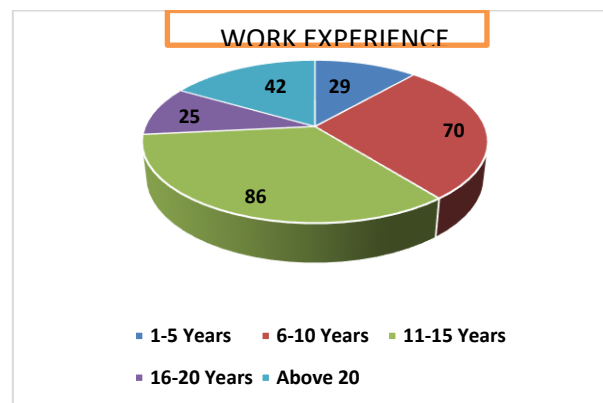


Fig. 4.5: Distribution of Respondents According to Work Experience.

Likewise, as shown in Figure 4.5 above, the respondents' work experience reveals that 42 (16.67%) had over twenty years of experience, 25 (9.92%) had between 16-20 years, 86 (34.13%) had 11-15 years, 70 (27.78%) had 5-10 years, and 29 (11.51%) had 1-5 years of working experience. These findings indicate that the study selected a group of seasoned employees relevant to the research topic. It also suggests that listed manufacturing firms in Nigeria have a staff-friendly atmosphere and effective employee retention strategies, as most respondents have remained with their companies for extended periods rather than seeking opportunities elsewhere. The respondents' extensive experience further implies that data was gathered from individuals with institutional knowledge of the manufacturing operations and human resource accounting practices that have supported these firms over time.

4.3. Descriptive statistics

4.3.1. Stakeholders' perception of human resource accounting practices among listed Nigerian manufacturing companies

In line with the international best practices on human resources accounting, especially the four major economies (the United States of America, China, Japan, and Germany) that have adopted the human resources accounting practices, a list of human resources accounting practices was developed. In the questionnaire, seven different human resources accounting practices were listed, but only the four major human resources accounting practices, namely the historical cost approach, replacement cost approach, opportunity cost approach, and economic value approach, considered practicable in the Nigerian context by the respondents, were analyzed in this study. Respondents expressed their opinion on a scale of 1-5 as very impracticable, impracticable, indifferent, practicable, very practicable. The study computed the mean score, standard deviation, and mean of the responses to the questionnaire items. As presented in Table 2, on average, each group of respondents is favorably disposed to the use of historical cost and replacement cost approaches for valuation of human resources in Nigerian listed manufacturing firms, indicating a high degree of agreement among the stakeholders about how and ways in which human resources should be accounted for in the annual reports of the listed manufacturing firms.

In response to the six questions establishing the respondent's preference for the use of the historical cost approach, respondents from manufacturing firms and accounting professional bodies (ICAN/ ANAN/ACCA) are similar in their degree of agreement and responses provided. For instance, most of the respondents strongly agreed that proper recording of expenditure made in recruiting employees should be maintained and not written off holistically as an expense, which resulted in a mean score of 4.28 and 4.13 for the manufacturing firms and professional accounting bodies, respectively. They equally agreed that proper recording of expenditure made on training and developing employees, and the total expenditure incurred in hiring employees should be maintained, which means they believe in capitalization and amortization of human capital elements of the manufacturing firms.

Regarding the replacement cost method, except for the financial reporting council, all other respondents preferred this approach because it accounts for all expenses related to recruiting, hiring, training, and developing a replacement to the current level of skill and organizational familiarity. Although it is not yet widely implemented, the respondents felt that this method is well-suited for the Nigerian context since it reflects a more realistic valuation by including the current worth of the company's human resources in the year-end financial statements.

However, it should be noted that adopting this approach might encounter strong resistance due to the belief that it conflicts with traditional accounting practices, which rely on the historical cost concept for asset valuation.

Opportunity cost approach was also considered practicable by many of the respondents, but with a minimal level of agreement, as the mean values range from 3.21 to 3.92. Specifically, an overall mean of 3.46 was obtained from the statement on whether opportunity cost approach is practicable in listed manufacturing firms base on the fact that it creates opportunity cost for an alternative use of human resources, which suggest that majority of the respondents either agreed or were indifferent. Similarly, an overwhelming majority considered the method unsuitable because of their belief that only a scarce professionals will dominate the value of human resources of a company. They also do not consider the approach suitable as a quantitative base for planning, evaluating, and developing human assets of the firm as the overall mean was just 2.87. Rather, they considered it a bidding process and a promising approach towards more optional allocation of personnel.

Table 4.2: Human Resources Accounting Practices

S/N	Variable	MANUFR		NGX		FRC		ICAN		Mean of Mean	SD
A	Historical Cost Approach										
Ai	Proper recording of expenditure made in recruiting the employee is maintained	4.28	1.1	3.85	0.71	3.74	1.2	4.13	0.75	4.01	
a2	Proper recording of the expenditure made on training and developing the employees is maintained	4.05	0.25	3.66	0.9	3.50	1.0	3.91	0.98	3.78	
a3	Proper recording of the expenditure made on hiring the employees is maintained.	4.25	1.09	3.25	1.26	4.05	0.77	3.97	1.15	3.88	
a4	A proportion of the expenditure in recruiting the employees is written off to the income of the next few years, during which human resources will provide service.	4.11	0.39	3.22	0.94	3.42	1.16	3.75	1.19	3.63	
a5	A proportion of the expenditure on training and developing the employees is written off to the income of the next few years, during which human resources will provide service.	4.50	0.12	4.16	1.07	4.00	1.00	4.21	0.85	4.22	
a6	Employees' total costs are capitalized and are amortized over the period of engagement of an employee.	4.42	0.25	3.92	1.17	4.55	0.11	4.01	1.10	4.23	
B	Replacement Cost Approach										
b1	This approach takes into consideration all costs involved in recruiting, hiring, training, and developing the replacement to the present level of proficiency and familiarity with the organization.	4.52	0.59	3.56	0.16	2.72	0.45	4.78	1.18	3.90	
b2	This approach is more realistic as it incorporates the current value of the company's human resources in its financial statements prepared at the end of the year.	4.72	0.55	4.09	0.31	3.87	1.14	4.24	1.11	4.23	
b3	Human resources of our organization are to be valued on the assumption that a new, similar organization must be created.	4.34	0.22	3.58	1.49	4.15	0.66	3.81	1.05	3.97	
b4	Our organization does not practice this method because it is at variance with the conventional accounting practice of valuing assets.	4.07	0.74	3.98	1.08	4.03	1.00	3.81	1.19	3.93	
C	Opportunity Cost Approach										
c1	This approach can be adopted in our organization because it creates opportunity costs for an alternative use of our human resources.	3.59	1.04	3.21	0.08	3.92	1.14	3.46	0.64		
c2	This approach is suitable because only scarce people will comprise the value of human resources.	2.15	1.99	2.45	1.25	3.05	1.18	2.75	1.30		
c3	This approach is more suitable because a bidding process such as this is a promising approach towards more optional allocation or personnel	2.00	1.54	2.25	1.27	2.50	1.31	3.00	0.91		
c4	This approach serves as a quantitative base for planning, evaluating, and developing the human assets of the firm	2.95	1.01	2.63	0.97	2.52	0.78	2.87	0.49		
D	Economic Value Approach										
d1	This approach is most preferred because it facilitates decisions involving the allocation of resources by measuring the expected rate of return of the employees	4.51	0.26	2.25	0.58	2.50	0.61	4.20	0.58		
d2	Helps management to allocate people to jobs in a way that will optimize job productivity, human resource development, and individual satisfaction	3.97	1.14	2.10	1.02	2.31	0.29	3.58	0.77		
d3	It makes managers think of strategies designed to influence the value of people unrealistically.	2.89	1.00	4.25	0.16	4.87	0.82	2.17	0.22		
d4	The approach enables the administration of organizational rewards in relation to a person's value to the organization.	4.22	0.74	4.54	0.44	3.50	1.00	3.75	1.08		

Source: Researcher 2024.

Table 4.3: Summary Statistics for All Variables

Variables	Mean	Median	Mode	Std. Dev.	Min	Max	No of Obs.
Firm Size	0.469	0.358	-	0.087	0.27	0.652	660
Firm Age	29.00	64.00	-	0.086	22.00	64.00	660
Ownership Structure	12.938	13.132	14.205	0.487	8.462	18.296	660
Audit Quality	0.85	1.00	1.00	0.007	0.00	1.00	660
Return on Capital Employed	0.163	0.080	0.093	0.032	-0.069	1.176	660
Return on Assets	0.112	0.15	0.09	0.62	0.09	0.47	660
Earnings Per Share	2.406	4.25	2.15	0.74	2.87	11.16	660

Source: Researcher 2024.

4.3.2. Descriptive statistics for control variables and corporate performance

Table 4.3 presents a descriptive statistical overview of the firm-specific variables, including firm size: big organisations can implement HRA as the result of good infrastructure and advantageous status (Afolabi et al., 2021); ownership structure: firms of few ownership may be able to implement good governance and investment in human capital, but they might not be free with transparency, while firms with dispersed ownership can have better disclosure; audit quality: high quality audit promotes transparency and credibility of HRA practices (Okolie & Izedonmi, 2020); and firm age: organisations of older age may tend to resist new accounting practices like HRA, while modern firms could be adaptive to human capital disclosure. Other variables are corporate performance indicators such as earnings per share (EPS), return on assets (ROA), and return on capital employed (ROCE). The summary statistics include measures like mean, median, mode, standard deviation, minimum, and maximum values, as well as the total count of observations. These data were extracted from the audited financial statements of the selected manufacturing companies within the study sample for the period under examination.

Firm size, which was measured using the natural logarithm of net assets, recorded a mean of 0.469, with a standard deviation of 0.087, a minimum value of 0.27, and a maximum value of 0.65. Based on capitalization of 25 billion for listed firms (Ogunbade & Oyerogba, 2020), the statistics show that the companies in our sample are relatively large to accommodate innovation, such as human resources accounting. As presented in Table 4.3, the mean score for firm age, measured by the age of the company from date of incorporation, was 29 and ranged from 22 to 64, which means that the youngest company was 22 years old, while the oldest company in our sample was 64 years old. The result suggests that there is a mixture of different age categories in the sample for this study, which can aid the generalization of the findings of this study since no age group is left out.

For the ownership structure, the statistics presented in Table 4.3 suggest that concentrated ownership is feasible among the companies for this study. The Securities and Exchange Commission Code of Corporate Governance (SEC, 2018) refers to ownership concentration as a situation in which an individual owns more than 5% equity in a company, as well as institutional holdings exceeding 10% of the firm's equity. In this study, we obtained a mean figure of 12.938, indicating that, on average, an individual or corporation may have about 13% of the total equity of a manufacturing firm. Regarding audit quality, the results indicate that approximately 85 percent of listed manufacturing firms are audited by the Big 4 audit firm. This represents a significant increase from the 74 percent earlier reported by Adwally (2015), indicating that higher reliability can be placed on the financial statements published by the Nigerian listed manufacturing firms.

For the dependent variables (return on capital employed, return on assets, and earnings per share), the descriptive statistics' results were also presented in Table 4.3. In these results, the mean figure for return on capital employed was 0.163, while the minimum and the maximum figures were -

0.069 and 1.176, respectively. The minimum figure of -0.069 suggests that some companies had negative return on capital employed, indicating bad performance for those companies. This result also suggests an inadequate use of the company's capital by the management of some listed manufacturing firms in Nigeria. On average, the listed firms equally generated a relatively low return on assets of about 12% during the years under consideration. For earnings per share, the results range from 2.87 to 11.16 with an average of 2.406 and a standard deviation of 0.749. The standard deviation of 0.749 in comparison with a mean of 2.406 indicates a wider dispersion of data across different companies in the listed manufacturing sector in Nigeria. However, the maximum value of 11.916 indicates that some companies had about N12 earnings during the period under consideration, which represents a good performance.

4.4. Analysis of the trend of corporate performance for the period 2013-2022

Figures 4.6 to 4.8 present the results of trend analysis for all three proxies for corporate performance. As commonly used in financial analysis, trend analysis helps analysts to evaluate the performance and risk of a business as well as to forecast future predictions and make informed decisions. The moving average was used to compute the trend analysis for corporate performance in this study. The data for this analysis covers a year's period, between 2013 to 2022, which resulted in ten ten-year series. Three measures of corporate performance (return on capital employed, return on assets, and earnings per share) were used. Thus, performance was measured from both the accountants' and investors' perspectives.

As depicted in Figure 4.6, the trend analysis of Return on Capital Employed (ROCE) on an annual basis indicates a marginal rise between 2013 and 2014, followed by a notable decline from 2014 to 2015. A consistent upward movement in ROCE was observed from 2015 through the end of the 2018 financial year. However, a sharp decline occurred again during the 2019 and 2020 financial years. The year 2021 witnessed a modest recovery in ROCE. The drop between 2014 and 2015 can likely be linked to the global financial crisis and concurrent financial market reforms in Nigeria during that time. The significant decline in 2020 is plausibly associated with the economic disruptions caused by the COVID-19 pandemic, which had widespread global effects. Conversely, the gradual recovery seen in subsequent years may be attributed to supportive macroeconomic policies implemented by the government in response to the downturn.

There was a significant improvement in return on capital employed from 2015 to the end of the 2018 financial year, which is consistent with the results of other financial performance indicators as well as findings in previous studies (Oluwagbemiga, 2021). The rise in return on capital employed continued from 2015 to the end of the 2018 financial year, which implies that the companies overcame the challenges associated with moving from the local standard to the international standard within a short period. This might also reflect management effectiveness in utilizing the company's assets for the growth of the company. Details can be found in Figure 4.7

As shown in Figure 4.8, the trend analysis of earnings per share (EPS) for Nigeria's listed manufacturing companies over the ten years demonstrated significant fluctuations. The peak performance was recorded in 2018, with earnings reaching roughly 120 kobo per share. In contrast, the lowest EPS was observed in 2013, amounting to approximately 28 kobo per ordinary share. Notably, there was a consistent upward trend in EPS during the years 2015 through 2018.

The drop in EPS in 2013 may be linked to the adoption of International Financial Reporting Standards (IFRS), which began in 2012 and may have initially impacted financial reporting and performance indicators. However, the progressive improvement in EPS in the subsequent years likely resulted from increased market confidence and customer patronage following the full adoption of IFRS, alongside supportive macroeconomic policies introduced by the government to enhance stability in Nigeria's capital market.

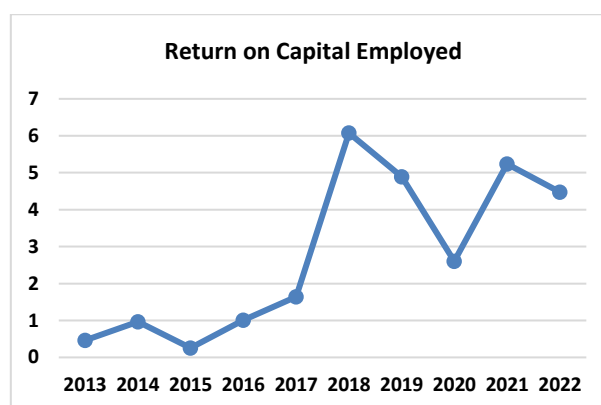


Fig. 4.6: Trend Analysis Results for Return on Capital Employed.

Source: Researcher 2024.

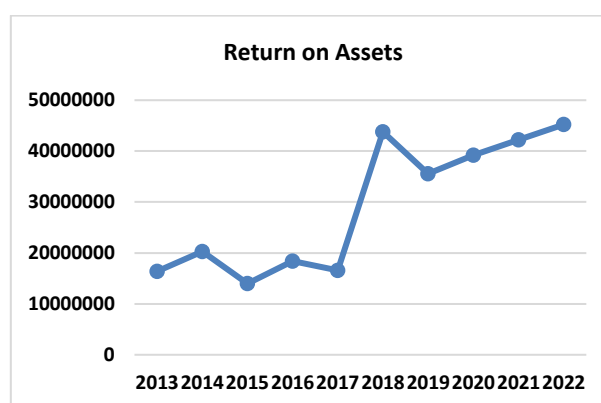


Fig. 4.7: Trend Analysis for Return on Assets.

Source: Researcher 2024.

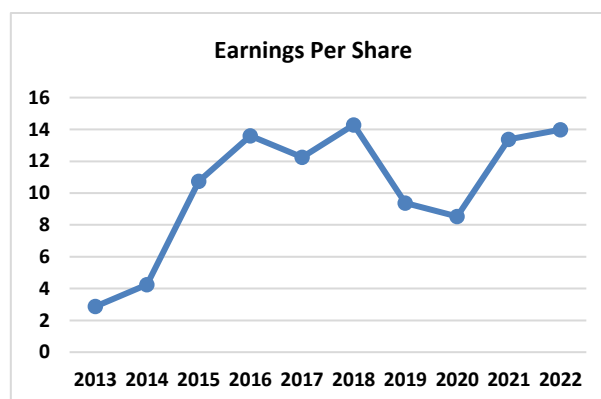


Fig. 4.8: Trend Analysis Results for Earnings Per Share.

Source: Researcher 2024.

4.5. Diagnostic test

This section ascertained the compliance of the regression model with the classical ordinary least squares (OLS) assumption through some diagnostic tests. The diagnostic test conducted in this study includes reliability, normality, autocorrelation, homoscedasticity, and multicollinearity tests. A reliability test was carried out with the use of Cronbach's alpha. One-sample Kolmogorov-Smirnov test was used to test for normality, while autocorrelation, homoscedasticity, and multicollinearity were tested using Durbin-Watson statistic, Breusch-Pagan test, and Variance Inflation Factor, respectively.

4.5.1. Reliability test

Reliability is the degree to which assessment instruments produce stable and consistent results (Ogunbade & Oyerogba, 2020). There are several forms of reliability tests in research. However, this study adopts internal consistency reliability, which has been defined as a measure of reliability used to evaluate the degree to which different test items that probe the same construct produce similar results (Ogunbade & Oyerogba, 2020). In this study, the reliability of the items was assessed using Cronbach's Alpha, a coefficient that measures the internal consistency of a set of variables. As noted by Oluwagbemiga (2021), the closer Cronbach's Alpha is to 1, the more reliable the measurement, with a recommended minimum threshold of 0.7. Reliability tests were applied to all four human resource accounting approaches examined: the economic value approach, opportunity cost approach, replacement cost approach, and historical cost approach. Table 4.4

shows that the economic value approach yielded a Cronbach's Alpha of 0.715, the opportunity cost approach recorded 0.766, the replacement cost approach achieved 0.811, and the historical cost approach scored 0.784. These results suggest that the data collected are both reliable and suitable for statistical analysis, as all the Cronbach's Alpha values exceed the accepted 70% benchmark.

Table 4.4: Reliability Test

	Variables	Cronbach's Alpha	No. of Items
1	Historical Cost Approach	0.784	6
2	Replacement Cost Approach	0.811	4
3	Opportunity Cost Approach	0.766	4
4	Economic Value Approach	0.715	4

Source: Researcher 2024.

4.5.3. Normality test

Many parametric statistical methods, including analysis of variance (ANOVA), t-tests, correlation, and linear regression, rely on the assumption that the data under analysis follows a normal distribution. Put differently, it is presumed that the population from which the samples are taken conforms to a normal distribution pattern. This assumption becomes particularly important when analyzing the influence of one variable on another. Failing to meet the assumption of normality can undermine the validity of statistical results, making it difficult to draw accurate conclusions. Because of this, verifying normality is a critical step, especially in parametric analysis, where the robustness of the test relies heavily on the assumption being satisfied. In this research, we evaluated the normality of the dataset related to the dependent variables: Earnings Per Share (EPS), Return on Assets (ROA), and Return on Capital Employed (ROCE) using the Kolmogorov-Smirnov test.

The Kolmogorov-Smirnov (K-S) test—often referred to as the one-sample K-S test—is a non-parametric statistical tool used to determine whether a dataset follows a particular distribution pattern, such as normal, uniform, exponential, or Poisson. This method is commonly applied to evaluate the univariate normality of a dataset by comparing its actual cumulative distribution with the expected distribution of a theoretically normal population. In interpreting results, a p-value greater than 0.05 suggests acceptance of the null hypothesis (H_0) and rejection of the alternative hypothesis (H_1), indicating the data do not significantly differ from the expected distribution. On the other hand, a p-value below 0.05 leads to rejection of the null in support of the alternative. In this study, the p-values associated with the dependent variables: EPS, ROA, and ROCE were 0.722, 0.831, and 0.619, respectively. Since all p-values exceeded the 0.05 threshold, we retained the null hypothesis in each case. This indicates that the data followed a normal distribution, validating its suitability for further regression analysis.

Table 4.5.4: Normality Test Results

		ROCE	ROA	EPS
N		660	660	660
Normal Parameters	Mean	0.678642	0.353219	0.672895
	Std. Deviation	1.895991	2.155621	1.037224
	Absolute	0.538	0.749	0.615
Most Extreme Differences	Positive	0.462	0.251	0.572
	Negative	-0.522	-0.399	-0.428
Kolmogorov-Smirnov Z		0.619	0.623	0.566
Asymp. Sig. (2-tailed)		0.804	0.497	0.425

Source: Researcher 2024.

4.5.5. Autocorrelation test

The test for this study employed Durbin-Watson statistics to assess the presence of autocorrelation. The purpose of the test was to determine whether residuals were independent over time. One of the key assumptions of the Ordinary Least Squares (OLS) method is that residuals must not be time-correlated, as such correlation can lead to misleading regression outcomes. The null hypothesis tested was that the dataset does not exhibit first-order serial correlation. According to the results displayed in Table 4.6, the data showed no signs of serial correlation, as indicated by a p-value greater than 0.001. This finding confirms that the residuals are uncorrelated, thereby validating the use of linear regression for this analysis. The same testing procedure was applied to each dependent variable, and the outcomes, also reflected in Table 4.6, confirm that serial correlation was not present in any of the cases.

Table 4.6: Durbin Watson Statistics for Autocorrelation

Variables	D.W. Statistics	P-Value
Return on capital employed	2.345282	0.628
Return on Assets	2.289509	0.537
Earnings per Share	2.061569	0.488

Source: Researcher 2024.

4.7. Homoscedasticity test for HRA and corporate performance

In statistics, a vector of random variables is homoscedastic if all its random variables have the same finite variance. In statistical analysis, a set of random variables is said to be homoscedastic when each variable in the set exhibits the same finite variance. A significant breach of the homoscedasticity assumption—mistaking a heteroscedastic distribution for a homoscedastic one—can result in an exaggerated measure of model fitness, such as the Pearson coefficient. To assess whether the residuals in the regression model display constant variance, a homoscedasticity test was carried out. If the error terms exhibit equal variance, the distribution is considered normal. Conversely, when variability differs across values of the independent variable, it indicates heteroscedasticity. This study employed the Breusch-Pagan test, introduced by Breusch and Pagan (1979), to examine the homogeneity of variance. The hypotheses guiding the test are:

H_0 : The dataset exhibits homoscedastic variance.

H_1 : The dataset exhibits heteroscedastic variance.

According to the decision rule, if the p-value exceeds 0.05, the null hypothesis (Ho) is accepted, and the alternative (H1) is rejected. Conversely, a p-value below 0.05 leads to rejection of Ho in favor of H1. As shown in Table 4.7, the test statistic for earnings per share was 7.1145 with a p-value of 0.1008. For return on assets and return on capital employed, the test statistics were 6.9452 and 4.5291, with corresponding p-values of 0.3143 and 0.5330, respectively. Since all p-values are greater than 0.05, the null hypothesis is accepted in each case, indicating that the data for EPS, ROA, and ROCE are homoscedastic. These findings confirm that the data are appropriate for linear regression analysis.

Table 4.7: Homoscedasticity Test for Dependent Variables

Variables	Test Statistic	Degree of Freedom	P-Value
ROCE	4.5291	7	0.5330
ROA	6.9452	7	0.3143
EPS	7.1145	7	0.1008

Source: Researcher 2024.

4.5.5. Multicollinearity test

In multiple linear regression, multicollinearity is an assumption that, if violated, can cause the entire regression results to be spurious. Therefore, the common test for detecting multicollinearity is the variance inflation factor (VIF). The Variance Inflation Factor (VIF) represents the extent to which the variance of a specific partial regression coefficient is inflated due to that variable's correlation with other predictors in a regression model (Dennis, 2011). Generally, a lower VIF is preferred, as higher values can negatively influence the accuracy of results derived from multiple regression analysis.

Since VIF quantifies the impact of multicollinearity on the variance of an estimated coefficient, Oluwagbemiga (2021) recommends using a threshold of 2.5 to detect problematic multicollinearity. Other researchers, however, suggest a more flexible cut-off, considering VIF above 3.0 as an indication of multicollinearity. On the other hand, Adwally (2015) argues that these thresholds should be interpreted within context, considering factors that affect the variance of regression estimates.

In alignment with the position of Oluwagbemiga (2021), this study utilized a VIF cut-off of 2.5 to identify multicollinearity concerns. As shown in Table 4.8, the opportunity cost approach had a VIF of 2.118, the replacement cost approach was 1.793, the economic value approach recorded 1.612, while the historical cost approach showed 1.448. These figures confirm that all predictor variables fall within the accepted threshold, indicating the dataset is appropriate for conducting multiple regression analysis.

Table 4.8: Test for Multicollinearity

Variables	Tolerance	VIF
Historical cost approach	0.799	1.448
Replacement cost approach	0.823	1.793
Opportunity cost approach	0.529	2.118
Economic value approach	0.575	1.612

Source: Researcher 2024.

4.6. Regression analysis results

4.6.1. Effects of human resource accounting practices on corporate performance

In this research, corporate performance was assessed using three key indicators: earnings per share (EPS), return on assets (ROA), and return on capital employed (ROCE). Given that the number of observations for the dependent variable (660) exceeded those for the independent variable (252), the study employed an unbalanced panel regression method to evaluate the impact of human resource accounting on the financial outcomes of Nigerian manufacturing firms listed on the stock exchange.

Table 4.9: Regression Results of Human Resources Accounting and Corporate Performance

Variables	1	2	3
		ROCE	ROA
Historical cost approach	0.097***	0.062** (0.014)	0.377** (0.004)
Replacement cost approach	0.058***	0.079** (0.09)	0.428** (0.014)
Opportunity cost approach	0.148**	0.122** (0.035)	0.267** (0.049)
Economic value approach	0.113	0.158 (0.027)	0.558 (0.067)
Multiple R:		0.742	0.803
R-Square:	0.551	0.644	0.601
Adjusted R-Square:	0.426	0.498	0.485

Note: The figures in parentheses are the standard error for the regression coefficients.

Source: Researcher 2024.

As presented in Table 4.9 above, increases in the independent variables, namely, the historical cost approach, replacement cost approach, opportunity cost approach, and economic value approach, were associated with corresponding improvements across all three financial performance indicators (EPS, ROA, and ROCE). From these findings, it can be concluded that human resource accounting practices exert a statistically significant effect on financial performance.

More specifically, adopting the historical cost approach by just one unit may lead to an estimated 38% rise in earnings per share, a 6% boost in return on assets, and around a 10% increase in return on capital employed. This outcome aligns with the human resource value theory introduced by Lev and Schwartz (1971), which suggests that the historical cost method allows organizations to monitor expenditures related to their human resources. These costs include, but are not limited to, recruitment, employee training and development, as well as

salaries and associated benefits. By capitalizing these expenses, organizations can reduce their overhead cost and increase their operating profits. The result is consistent with Iliemena and Okolocha (2019), Sahdin (2019) and Alao et al (2023).

The result also illustrates that a unit increase in the use of the replacement cost approach in evaluating the value of organization employees by the manufacturing firms may orchestrate about 6% increase in ROCE, 8% increase in ROA, and 42% increase in EPS. The results of the regression also showed that a unit variation in the use of the opportunity cost approach will have a corresponding increase of approximately 15% in ROCE, 12% in ROA, 27% in EPS, and these relationships are statistically significant at 5% and 10% levels. Therefore, the result shows that the alternative hypothesis that predicts a significant relationship between corporate performance and human resources accounting has been validated.

Lastly, the research revealed a strong and statistically significant connection between the economic value approach and indicators of financial performance. This aligns with the outcomes of several earlier studies (Jesuwunmi et al., 2021; Oladele et al., 2018; Atoyebi et al., 2021; Balogun et al., 2021). On the other hand, the findings differ from those reported by Islam and Sarker (2016) as well as Wiyadi et al. (2021). This result implies that greater implementation of human resource accounting practices tends to reduce the annual overhead costs included in operational expenses, which in turn boosts overall corporate performance. It should also be noted that although all the models are statistically significant, return on assets has the strongest explanatory power as measured by the adjusted R-square, which implies that human resources accounting has the strongest influence on return on assets than all other proxies for corporate performance.

5.1. Summary

This study examined the effects of Human Resource Accounting (HRA) practices on corporate performance, focusing on listed manufacturing firms in Nigeria. Specifically, it analyzed stakeholders' opinions on four major global HRA practices—Historical Cost Approach (HCA), Replacement Cost Approach (RCA), Opportunity Cost Approach (OCA), and Economic Value Approach (EVA). It also reviewed the trend of corporate performance using Return on Capital Employed (ROCE), Return on Assets (ROA), and Earnings Per Share (EPS) from 2013 to 2022. The study further assessed the impact of HRA on corporate performance, incorporating firm-specific control variables such as firm size, firm age, ownership structure, and audit quality.

The methodology section provided a comprehensive overview of research design, population, sampling techniques, and data sources. Both primary and secondary data were used. Structured questionnaires were employed for primary data, and validity and reliability tests ensured the soundness of the instrument. Secondary data was obtained from financial statements and industry reports. The section also covered model specification, data analysis, and diagnostic tests, emphasizing the contribution to knowledge. Data were analyzed using descriptive statistics (mean, median, mode, and standard deviation) and inferential statistics (unbalanced panel regression and random effects analysis). Results revealed a significant relationship between HRA practices and corporate performance. All control variables—except ownership structure—had a significant effect on ROCE, ROA, and EPS.

5.2. Conclusion

Findings from the study led to the following conclusions aligned with the research objectives. Stakeholders agreed that all four HRA practices—HCA, RCA, OCA, and EVA—are feasible in the Nigerian context and should inform managerial decision-making. The trend analysis showed considerable fluctuations in corporate performance over the ten years, indicating instability in the financial health of listed manufacturing firms. Regression analysis confirmed that HRA practices significantly affect corporate performance. An increase in the application of HRA methods corresponded with improvements in ROCE, ROA, and EPS.

5.3. Recommendations

Based on the study's findings, the following recommendations are proposed:

- 1) The descriptive statistics revealed consistently low or negative returns on equity and assets for many firms. Boards of directors should critically assess the underlying factors contributing to this weak performance.
- 2) Although all four HRA practices significantly correlate with corporate performance, the Historical Cost Approach demonstrated the most influence. Nigerian manufacturing firms are therefore encouraged to adopt this approach for enhanced financial outcomes.
- 3) The study observed a high level of ownership concentration, which negatively impacted firm performance. Despite existing regulatory provisions on ownership structure, enforcement remains weak. Regulatory bodies should ensure strict compliance with the SEC Code of Corporate Governance.
- 4) The persistent decline in corporate performance requires urgent attention from firm management, boards, and the Nigerian Exchange Group. Government intervention through fiscal and macroeconomic policies may be necessary to stabilize the sector.
- 5) Accounting and Human Resource practitioners could also be trained on Human Resource Accounting Analysis to be Certified Human Resource Accounting Analyst (CHRAA). For clarity, course contents may include- Foundations of HRA, IFRS Alignment (IAS19, 38, IFRS13, IFRS S1/S2), Human Capital Valuation Models, Sector-specific Applications, Ethics & Governance in HRA, and HRA implementation report, just to mention a few.

5.4. Contribution to knowledge

This study offers significant contributions to the literature by examining the effects of HRA on corporate performance using four globally recognized approaches—HCA, RCA, OCA, and EVA. Unlike earlier studies that relied mainly on gross labor cost, this study provides a broader conceptual framework and incorporates stakeholder perspectives. It further expands the scope of corporate performance evaluation by using multiple indicators (ROCE, ROA, and EPS), reflecting accounting, managerial, and investor perspectives. Additionally, this study integrated firm-specific variables, providing a multidimensional view of HRA's impact in a developing economy. To the best of our knowledge, no prior study has jointly examined HRA practices, firm characteristics, and corporate performance in the Nigerian manufacturing sector.

5.5. Limitations and areas for future research

The study was limited to a single sector within a developing economy. Future research should consider multi-sectoral, to be specific, (Agriculture, banking, telecommunication, health, and education sectors) analyses, and cross-country (e.g. United States of America, China,

Japan, Germany, South Africa, India, Brazil, and Malaysia) comparisons. The further study could also explore variables such as employee turnover rate, training cost per employee, Research & Development expenditure, CEO/Board tenure, Labour Productivity, Macroeconomic Volatility index, and Regulatory quality. Furthermore, while this study utilized closed-ended questionnaires for quantitative ease, qualitative insights might have been missed. Future studies should incorporate open-ended instruments to capture more nuanced stakeholder perspectives.

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