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HUMAN RESOURCE ACCOUNTING AND FINANCIAL PERFORMANCE OF LISTED OIL AND GAS COMPANIES IN NIGERIA

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ABSTRACT

Funding employees' training, making adequate provision for health and safety of workers, as well as paying a reasonable remuneration are vital investments that businesses can make. However, due to lack of proper personnel to oversee and manage these investments, oil and gas companies with enormous resources and newest technology found themselves in the middle of financial catastrophe. This study examined human resource accounting and financial performance of listed oil and gas companies in Nigeria. Ex post facto research design was adopted by the study, while secondary data was gathered from the annual report and accounts of seven (7) listed oil and gas companies in Nigeria from 2013 to 2024, covering a 12-year period. Descriptive statistics, correlations and multiple regressions were used to analyze the data collected. Using 0.05 level of statistical significance, the findings revealed that staff training cost (p-value = 0.1440) as well as health & safety cost (p-value = 0.3187) do not significantly affect return on equity, while employee remuneration (p-value = 0.008) significantly affects return on equity of oil listed and gas companies in Nigeria. The study concluded that, with the exception of employee remuneration, cost associated with training of staff and health & safety are not well managed since they have no significant effect on return on equity of the selected companies. The study recommended that management of listed oil and gas companies in Nigeria should make adequate provision for their employees through investing more in training as well as health facilities in order to increase productivity, which in turn improves the firms' financial performance.

Keywords: Employee remuneration, Financial performance, Health & Safety cost, Human resource accounting, Return on equity, and Staff training cost.

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1. INTRODUCTION

Background of the Study

Financial performance is the degree to which a company conducts its business operations using its assets to generate income. It may be employed to evaluate companies' performance in the same sector or across industries generally by looking at effectiveness of financial status of a company during a specific period (Ajirole, 2019).

Furthermore, Ghasempour and Yusof (2021) posited that an organization's financial performance over a specific time period may be used to determine its overall financial health. However, the disclosure of certain information, assets, intellectual capital, and human resources—all of which have established a major competitive advantage—has a positive and substantial influence on a company's performance.

In this fast-paced world, companies use their employees' intellect and experience as a competitive advantage to effectively compete in the marketplace, and it is true that information has become power. As a result, it is widely acknowledged that the most crucial expenditures that companies can make are providing for employee training and development, making sufficient provisions for workers' health and safety, and offering fair compensation. These investments should be classified as capital expenditures, which are included in human resource accounting (Kharal et al., 2017).

Onyeukwu et al. (2021) viewed human resource accounting as the accounting for a business's investment in its workers with the goal of maximizing shareholder value and accomplishing organizational goals. They also pushed the notion that the current conventional accounting of human resources as a cost optimizes the financial reporting system. They pointed out that human resources accounting, a branch of accounting, is encouraging the identification of human capital as a cost to be capitalized, in contrast to the traditional view of human capital expenditures as an immediate charge on periods' revenue.

According to Oladele et al. (2018), it is well known in human resource accounting that the caliber, character, and quality of personnel are crucial to the success of any company, organization, or endeavor. However, a business with massive physical resources and cutting-edge technology may find itself in the midst of a major financial disaster without the right staff to supervise and manage its operations, which would negatively impact its financial performance. In light of this, the study looks at how financial performance of listed Nigerian oil and gas firms is affected by human resource accounting.

Statement of the Problem

It is hard to overestimate the significance of having a solid and competitive human resource base for businesses to succeed, as a company's capacity to grow depends on the quality of its workers' resources (Omodero & Ihendinihu, 2017). Robbins (2021) asserts that the quality of employees that successful businesses are able to recruit and retain distinguishes them from their competitors in almost every field. Therefore, one of the best business choices that can be made is to invest in the training and development of employees. Humans, like other physical assets, are prone to switching companies, notwithstanding the claims made by some authors that human resources must be seen as capital expenditures (Omodero & Ihendinihu, 2017).

Therefore, rather than being displayed as assets in a firm's statement of financial position, the expenditures incurred as result of developing of human resource are frequently expensed in the income statement. According to Alao et al. (2023), the primary barriers to recognizing human resources as an asset mostly stem from their characteristics, their financial worth, and

the reporting structure. The essence of human capital management, according to Odobi and Enwuchola (2022), is the process of valuing human capital and how to account for its worth in financial reports. They also noted that because human capital is wasted so quickly, most firms nowadays do not wish to invest in its growth.

According to Alao et al. (2023), a business must be able to make the most of its current human resources by employing the appropriate tactics if it hopes to gain a competitive edge. In order to provide value to the business, the corporation should endeavor to improve its staff through human resource development initiatives, which require human resource data. These figures will come from human resources accounting (Avazzadehfath & Raiashekar, 2020).

Human resource accounting in Nigeria has been the subject of numerous empirical studies, including those by Kankpang et al. (2024), Doutimiareye & Major (2022), Ochei et al. (2023), Enekwe et al. (2022), Akinlade & Adegbie (2020), Akinjare et al. (2018), and Omole et al. (2017). These prior studies focused on the accounting of human resource and financial performance of Nigerian listed oil and gas companies using financial performance proxies like profit after tax and return on assets, which are internal measurements of a company's financial success. Few studies, such as the ones conducted by Adewumi et al. (2023) and Zatiock et al. (2024) measures financial performance with the use of external market performance metric like return on equity. Prospective and existing investors, however, mainly base their assessments of a company's performance on external market measures like return on equity and earnings per share in addition to internal financial performance criteria. The gap in the literature is the lack of study on human resource accounting and external market performance of Nigerian listed oil and gas companies.

Therefore, the study focuses on analyzing the financial performance and human resource accounting of Nigerian listed oil and gas companies, paying particular attention to employee remuneration, staff training cost, and health &safety as indicators of human resource accounting, while return on equity (external market valuation) was used as financial performance proxy.

Research Objectives

i. To examine the effect of staff training cost on return on equity of listed oil and gas companies in Nigeria.
ii. To investigate the effect of employee remuneration on return on equity of listed oil and gas companies in Nigeria.
iii. To evaluate the effect of health and safety cost on return on equity of listed oil and gas companies in Nigeria

Research Hypotheses

Ho_1: Staff training cost has no significant on return on equity of listed oil and gas companies in Nigeria

Ho_2: Employee remuneration does not significantly affect return on equity of listed oil and gas companies in Nigeria

Ho_3: Health and safety cost has no significant effect on return on equity of listed oil and gas companies in Nigeria

2. LITERATURE REVIEW

Conceptual Review

Financial Performance

According to Karaye et al. (2017), corporate financial success includes both productivity and efficiency as well as the achievement of organizational goals. According to Karaye et al. (2017), it encompasses anything that helps to improve the value-cost relationship, not just cost reduction or value gain. According to Palagolla and Wickramasinghe (2019), it also has to do with a business's financial status, including profitability, sales growth, return on assets, and more.

Financial performance involves how well a business manages its resources (assets) to do business so as to generate profits over a certain period. It evaluates a company's overall financial status over a specific time frame and can be employed to assess a company's performance across sectors or within the same industry (Ajirole, 2019). The main source of data used to assess or evaluate how a firm performs is contained in the firm's financial statements that reveals the outcome of accounting. The financial statements comprise of data on changes in owner wealth, cash sources and uses over time, and sales, expenses, and earnings within a certain time frame (Ndukwe, 2018).

Financial performance, according to Folajimi et al. (2020), is calculated using a range of metrics, each of which focuses on a different aspect of the performance, which in-turn illustrates the overall financial status of a company during at a given period. Ajibola et al. (2024) opined that while evaluating a firm's financial performance, analysis of ratio would be an important technique to adopt. Analysis of these ratios would be useful to evaluate a firm's financial efficiency as well as profitability during a certain time frame. Nevertheless, this study employed return on equity as a a proxy for financial performance.

Return on Equity

Return on equity (ROE), according to Amahalu et al. (2017), is the proportion of profit that a business earns for each monetary unit of equity invested in the business. The amount of money that will be given back to shareholders is not specified by ROE because it depends on the company's choice on dividend payments and the rate of increase in the stock price.

Return on equity, according to Fernando (2020), is a gauge of a company's performance in respect to shareholder equity. This profitability statistic assesses a company's capacity to provide a return on its owners' investments. Net income divided by shareholders' equity yields return on equity (ROE), a gauge of financial success.

Since shareholders' equity is calculated by deducting a company's debt from its assets, Akinlade and Adegbie (2020) saw return on equity as the return on net assets. It is not always a good idea to have a high ROE. A high ROE might indicate a number of issues, such as inconsistent profitability or excessive debt. Furthermore, if a company's ROE is negative because of a net loss or negative shareholders' equity, it cannot be examined or contrasted with comparable businesses that have a positive ROE. Nonetheless, it's a strong sign of producing a return that justifies any potential risk associated with the investment.

Human Resource Accounting

In 1691, the human resource accounting (HRA) method was first developed in the United States. Akintoye et al. (2018) state that a number of accounting and finance research projects have produced human resource accounting. Instead of categorizing human resources as expenses, human resource accounting, commonly referred to as accounting for human

resources, involves documenting the money spent on human resources as assets. Because the fund handled human resources as an expense, the organization's profit was decreased.

Human resource accounting, according to Samartha et al. (2019), is a methodical procedure for identifying and quantifying intangible human resource assets in a business as well as informing stakeholders of the worth of human resources. Human resource accounting, according to Onyeukwu et al. (2021), is the accounting for a company's investment in its employees with the goal of boosting shareholder value and accomplishing corporate goals. Additionally, they asserted that the financial reporting system is suboptimized by the current tradition of accounting for human resources as an expense. In contrast to the earlier practice of recognizing human capital expenditures as an immediate charge against periods' income, human resource accounting as a discipline of accounting promotes the recognition of human capital as a cost to be capitalized (Onyeukwu et al., 2021).

Furthermore, according to Mohammed (2021), human resource accounting is the process of systematically evaluating, documenting, and exhibiting the value of human resources in an organization's accounts. The three elements of human resource accounting that this concept describes are the value of human resources, documenting the valuation in the appropriate accounting books, and disclosing financials in the corporate financial report.It comprises the methodical evaluation, recording, and presentation of the value of human resources in a company's financial statements. This idea covers three aspects of human resource accounting: calculating the value of human resources, documenting the valuation in suitable accounting systems, and including financial data in the business's financial report.

Staff Training Cost

According to Alao et al. (2023), the cost of teaching someone to perform at a particular level or broaden their skill set is known as training cost. Training increases the productivity of both individuals and organizations. Formal training is the price of preparing a person for a profession and giving him the necessary skills. In order to achieve performance goals, some training regimens may require extra expenses. These charges are included in the company's human resource investment and are referred to as unique training costs (Alao et al., 2023).

Akinlade and Adegbie (2020) assert that human resources are managed through human resource accounting in a manner akin to that of other organizational assets, and that their productivity requires sustained investment. This type of investment, which takes attrition and degradation into consideration, is capitalized and amortized over the resource's anticipated productive life (Flamholtz et al., 2015).

Human capital theory states that education and training increase worker productivity by transmitting useful knowledge and skills, which raises lifetime earnings and improves future pay. The idea is that since investing in education, training, and development raises individual earnings, it should be seen as an investment even when it is costly (Ajibola et al. 2025).

Employee Remuneration

According to Khudhair et al. (2020), employee compensation is the sum of money paid to workers for their work and services. It is a methodical way of paying employees for their labor. Nzyoka et al. (2019) state that all of the advantages a firm offers its employees are included in their remuneration package. In addition to non-monetary perks like stock options, official vehicles, and residences, it also offers financial incentives like commissions and bonuses.

Manukaji et al. (2019) viewed employee remuneration as the sum of an employee's wages and salary plus additional costs associated with their employment, including retirement benefits, social security, medical, insurance, training and development, allowances and incentives, and other subsidies or benefits. It is the total of an employee's wages and salary plus additional employee-related costs like social security, health and insurance, training and development, retirement benefits, allowances and incentives, and other subsidies or benefits.

Health and Safety Cost

According to Akinlade and Adegbie (2020), health and safety expenditures include necessary legal representation fees and other professional charges that a business incurs while representing itself in a health and safety inquiry with prior written clearance from the insurer. Neglecting the health and safety of employees may be expensive. According to Pall (2016), occupational accidents result in financial losses for the individuals involved, financial losses for the companies where they occur, and financial costs to society due to medical expenses and lost productivity.

Everyday job accidents and mishaps include burns, falls, broken bones, and mental health problems. They affect the worker's friends and family in addition to themselves. Nevertheless, the endeavor continues since errors and accidents can have detrimental effects on a company's income, reputation, and morale. A little incident at work has the potential to reduce output, discourage workers, and increase absenteeism (Gimba & Anyanwu, 2022).

Instead of being seen as a burden, maintaining safe operations should be seen as a financial advantage. Investing in a health and safety system shields your company against risks, incidents, and accidents (Mohammed, 2021). But disregarding health and safety regulations and guidelines can have serious, tangible repercussions for your company and its workers. These include things like monetary losses and fatalities. Because of this, it is imperative that a company include safety into every aspect of its operations rather than putting it on the periphery (Aljamaan, 2017).

Conceptual Model

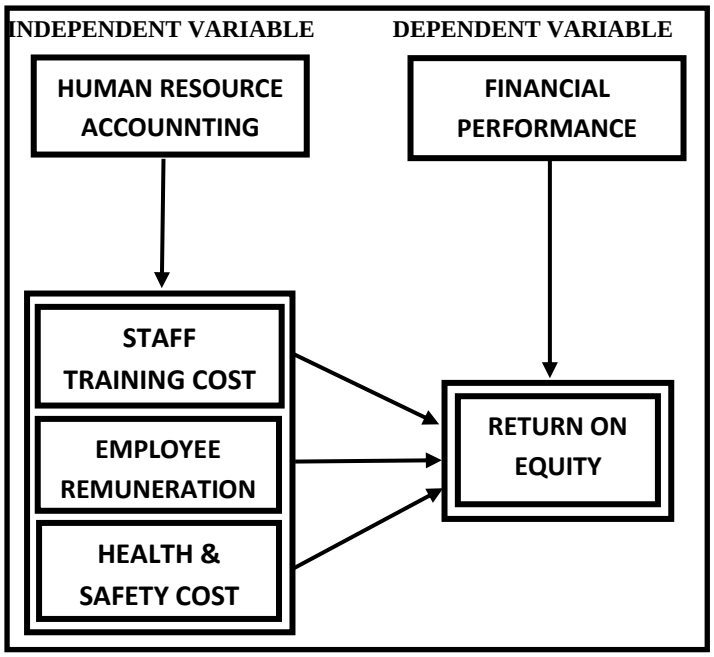


Figure 1: Conceptual Model
Source: Researchers (2026)

Underpinning Theory

Resource-Based Theory

The study's theoretical foundation is resource-based theory. The resource-based concept was initially put out by Wernerfelt in 1984. According to the notion, human resources cannot be duplicated or substituted. According to Onyinyechi and Ihendinihu (2017), human resources offer a firm the opportunity to gradually gain a competitive advantage over other businesses in the same industry.

Furthermore, according to the resource-based theory, human resources offer a source of long-term competitive advantage by satisfying the four fundamental conditions of value—rare, imitable, and organizational—all of which are necessary for maximizing an organization's value and ensuring operational efficiency. Therefore, in order to create a sustained competitive advantage, human resources need to be valuable and limited. It must also be difficult to duplicate and the company must provide a supportive environment for better prospective exposure (Alao et al., 2023).

The resource-based approach, according to Amber (2016), argues that businesses have resources, some of which provide them a competitive advantage and others of which help them perform better over the long run. A competitive advantage can be obtained through valuable and limited resources. If the company can protect itself from resource replacement, transfer, or imitation, that advantage can be maintained for long periods of time. According to the notion, valuable organizational resources and talents that are rare and challenging to duplicate sustain organizations' competitive advantage (Omodero et al., 2016).

Since all of the human resource attributes discussed in the theory—such as value, immutability, rarity, and organization—have an effect on human resource performance, either directly or indirectly, this study is based on the resource-based theory. The entire financial performance and operational effectiveness of Nigerian listed oil and gas businesses may be affected by this.

Empirical Review

The impact of human capital accounting data on the market value of listed oil and gas firms in Nigeria was investigated by Omole et al. (2017). The study made use of secondary data gathered from specific annual report and accounts of all listed oil and gas firms between 2005 and 2014. The analysis using econometric regression. The findings show that the cost of human capital has a significant and positive relationship with share price. According to the findings, capitalizing on corporate investments in human resources has the potential to boost oil and gas businesses' market worth and improve their reputation in Nigeria.

Using secondary data from ten (10) carefully chosen annual reports and financial summaries of oil and gas firms from 2012 to 2016, Akinjare et al. (2018) evaluated the effect of human resource accounting on the performance of oil and gas enterprises in Nigeria. The data gathered for the investigation is analyzed using ordinary least squares. The results indicate that the performance of Nigerian oil and gas enterprises is positively impacted by both gross labor costs and training and development expenditures. The study did not, however, discover any connection between organizational performance and health and safety expenses. According to the study's findings, human resource accounting often has a favorable and considerable influence on business performance, even while health and safety costs by themselves have no discernible effect.

Considering human capital as a foundation for company performance, Nwauzor and Tamunoemi (2020) examined the connection between human capital accounting and business performance in Nigeria's oil and gas industry. Nine (9) downstream listed oil and gas companies in Nigeria in 2018 made up the population of the study, which employed an ex-post factor research technique. The findings showed that market share and compensation cost had a positive and statistically significant association. The results also showed that the relationship between financial performance and human capital accounting was unaffected by the moderator variable of firm size.

With the use of ex post facto research design, Akinlade and Adegbie (2020) assessed the effect of human resource accounting on the financial reporting quality of Nigerian listed oil and gas companies. Twelve Nigerian oil and gas firms were polled. Using secondary data from 2004 to 2018, twelve oil and gas businesses were assessed using a targeted sample technique. Human resources were the foundation of this development in oil and gas enterprises, as revealed in the empirical findings. It was however found that human resource accounting has a substantial influence on the financial reporting quality of Nigeria's publicly traded oil and gas businesses.

The impact of human resource value on the return on assets of Nigerian listed oil and gas companies was examined by Enekwe et al. (2022). Ten (10) years, from 2010 to 2019, inclusive, of secondary data from the annual reports and accounts of four (4) listed oil and gas businesses in the Nigerian economy were employed in the ex-post facto study methodology. The multiple regression model was used to determine the extent to which the dependent variable—return on assets—of the companies under investigation is influenced by the independent variable, human resource value. The return on assets of listed oil and gas businesses in Nigeria is positively and significantly impacted by human capital efficiency, but human resource expenses have a negative and insignificant influence, according to regression analysis results.

The link between pre and post COVID19 human capital accounting and the financial performance of listed oil and gas firms in Nigeria was investigated by Doutimiareye and Major (2022). In the study, an ex post facto method was used. The sample size of the research comprised five (5) of the ten (10) listed oil and gas businesses listed on the Nigerian Exchange Group. Two-year intervals of pre-Covid-19 data from 2018 to 2019 and post-Covid-19 data from 2020 to 2021 were chosen for the study. Descriptive as well as panel multiple linear regression were employed by the study with the use of E-View12. It was found that personnel costs, cost associated with training & development, and the valuable added intellectual coefficient were unaffected by earnings per share of listed oil and gas companies in Nigeria before and after COVID-19.

From 2012 to 2021, Adewumi et al. (2023) examined the impact of human capital costs on shareholders' equity in Nigerian oil and gas enterprises. The study used panel pools and secondary data taken from the Nigerian Stock Exchange's annual financial reports of a selection of listed oil and gas businesses. The findings showed a favorable correlation between shareholders' equity and the cost of human capital. The return on equity is significantly impacted by the t-statistic p-values for the development cost, retirement benefit, and pension and provident fund contribution. However, it was shown that the return on equity of oil and gas companies is not significantly impacted by costs related to health and safety, hiring and selection, settlement allowance, and training.

Ochei et al. (2023) conducted a study on the performance of Nigerian oil and gas companies and human resource management. The annual reports of ten publicly traded Nigerian oil and gas businesses from 2012 to 2021 were used to collect information on personnel recruitment and selection costs, training and development costs, and profit margin. The panel model regression findings showed that the financial performance of Nigerian oil and gas enterprises is not significantly impacted by staff recruitment and selection, training expenses, or development expenditures. Overall, the findings demonstrate that human resources management has minimal impact on Nigerian oil and gas businesses' financial success.

Kankpang et al. (2024) looked at how human resource costs (HRC) affected listed Nigerian oil and gas firms' profitability. The analysis employed staff size, training and development, and compensation expenditures as stand-ins for human resource cost. On the other hand, a stand-in for profitability was profit after tax. For the inquiry, an ex post facto research design was employed. The data used in the study came from secondary sources only. Staff compensation costs were shown to be positively and strongly linked with enterprises' profit after tax. Furthermore, it was demonstrated that staff size had a negative effect on profit after tax for oil and gas companies, even while staff training and development costs have a significant influence on profit after tax.

Zatiock et al. (2024) looked at the financial performance of Nigerian listed oil and gas companies in relation to human capital. Ex-post facto research, which enables the utilization of historical data to comprehend the happenings of an entity under investigation, was employed in the study. The eleven (11) listed oil and gas companies as of 2022 formed the population. Nine oil and gas companies were sampled using purposive sampling. The panel data was collected over a fifteen-year period (2008 to 2022) from the financial statements of the chosen oil and gas companies listed on the Nigerian Exchange Group. Multiple regression analysis was utilized to examine the data. It was found that pension plans had a substantial and positive impact on the profitability of listed oil and gas companies in Nigeria. The pension plan's significant 1% impact on return on assets and return on equity served as evidence of this. On the other hand, salaries and wages, together with training and development, had a small but beneficial influence on return on equity.

3. METHODOLOGY

This study uses an ex post facto methodology. This research approach was chosen since the study's objective was to gather vital data on a particular phenomenon’s status without altering the circumstances. The Nigerian Exchange Group included eight (8) oil and gas companies as of December 31, 2024. The study's sample size consisted of seven (7) listed Nigerian oil and gas companies. Using the annual report and accounts of the firms under study, secondary data was gathered covering a 12-year span (2013–2024). The selected oil and gas companies are Conoil Plc, TotalEnergies Plc, Eterna Oil Plc, Ardova Plc, Japaul Oil & Maritime Plc, MRS Oil Plc, and OANDO Plc. The eighth listed oil and gas company (Aradel Holdings Plc) was excluded from this study, because the company was just listed as of October 2024, as a result, no public data on the study's topic could be found. Therefore, only seven companies were chosen. In order to determine the sample size, the study used the purposeful sampling approach. Additionally, a model was used to evaluate the effect of human resource accounting proxies (which includes staff training costs, employee remuneration, and health costs) on financial performance metric (return on equity). To evaluate the relationship between the proxies employed by the study, multiple linear regression was employed, as illustrated below:

ROE = f(STC, EMR, HSC) ……. i

The following is how the model was developed to fit the study:
$ROE = \alpha + \beta_1 STC + \beta_2 EMR + \beta_3 HSC + e$……..ii

Where;

ROE= Return on Equity (Dependent variable)
STC = Staff Training Cost (Independent variable)
EMR = Employee Remuneration (Independent variable)
HSC = Health and Safety Cost (Independent variable)
α = Intercept
β_1 -β_3 = Regression coefficient
e = Error term

4. RESULTS

This part covers the data analysis and interpretation of the results obtained through the analysis of the data collected. Also, the previously stated hypotheses were tested so as to make decision on the acceptance and rejection.

Presentation of Results

Table 1 Descriptive Results

	ROE	STC	EMR	HSC
Mean	0.162338	4.672351	5.913500	4.720711
Median	0.130000	4.786000	5.840000	4.644500
Maximum	4.338000	6.523000	7.089000	6.361000
Minimum	-2.751000	2.916000	4.641000	3.078000
Std. Dev.	0.885920	0.755422	0.554501	0.558926
Skewness	1.371052	-0.398128	0.116566	0.098454
Kurtosis	12.25478	3.246208	2.658859	3.221325
Jarque-Bera	298.9204	2.228638	0.540636	0.277900
Probability	0.000000	0.328139	0.763137	0.870271
Sum	12.50000	359.7710	449.4260	358.7740
Sum Sq. Dev.	59.64897	43.37037	23.06039	23.42986
s				
Observations	84	84	84	84

Source: E-Views Output, 2026

As shown in table 1 above, the average values for ROE, STC, EMR, and HSC were, respectively, 0.162, 4.672, 5.914, and 4.721. Given that EMR has the highest average value of 5.914 when compared to STC and HSC, it was clear from the value of the mean that it serves as the most effective predictor of ROE among others predictors. The variables were found to have maximum values of 4.338, 6.523, 7.089, and 6.361, respectively. Conversely, the variables' minimum values are shown as -2.751, 2.916, 4.641, and 3.078, in that order. Additionally, 0.886, 0.755, 0.555, and 0.559 were displayed as the standard deviation values. Additionally, because the probability values of 0.328, 0.763, and 0.870 related to Jarque-Bera statistics are higher than the 0.05, this can be considered that STC, EMR, and HSC data obtained are considered to be normally distributed, as they did not violate normality assumption. However, the analysis also found that the data collected on ROE violated normality assumption since the Jarque-Bera's p-value (0.000) is less than 0.05 threshold.

Table 2 Correlation Analysis

Correlation Probability	ROE	STC	EMR	HSC
ROE	1.000000			

STC	-0.135346	1.000000		
	0.2470	-----		
EMR	-0.042429	0.680264	1.000000	
	0.7178	0.0000	-----	
HSC	0.039528	0.523737	0.471203	1.000000
	0.7363	0.0000	0.0000	-----

Source: E-Views Output, 2026

The correlation results between the adopted variable ROE, STC, EMR, and HSC are shown in Table 2 above. The findings demonstrated that HSC has a weak positive link with ROE, with a correlation coefficient of 0.040, while STC and EMR had weak negative relationships with ROE, with correlation coefficients of -0.135 and -0.042, respectively.

Table 3 Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.701931	3	0.4399

Source: E-Views Output, 2026

The p-value of 0.4399, which is higher than the 0.05 threshold, can be regarded as statistically not significant based on the table above. The random effect regression model is therefore fit for the regression analysis.

Table 4 Multiple Regression Results (Random Effect)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.124950	1.248363	-0.100091	0.9206
STC	-0.296600	0.200745	-1.477495	0.1440
EMR	0.099656	0.265011	2.376044	0.0080
HSC	0.229979	0.229044	1.004084	0.3187

R-squared	0.371101	Mean dependent var	0.165120
Adjusted R-squared	-0.357512	S.D. dependent var	0.897638
S.E. of regression	0.899241	Sum squared resid	57.41302
F-statistic	1.912121	Durbin-Watson stat	2.412408
Prob(F-statistic)	0.043960		

Source: E-Views Output, 2026

The table above contains the previously defined regression model's coefficient, as seen below:

ROE = - 0.125– 0.2966STC + 0.0997EMR+ 0.230HSC

According to the preceding equation, STC has a negative impact on ROE (coefficient value: -0.2966), but EMR and HSC have favorable effects (coefficient values: 0.0997 and 0.230, respectively). This implies that the ROE of the chosen oil and gas companies would decrease by 0.297 if STC increased by one unit, but a rise in EMR and HSC would raise ROE by 0.0997 and 0.230, respectively.

Additionally displayed were the t-calculated values for the independent variables (STC, EMR, and HSC), which were -1.477, 2.376, and 1.004, respectively. These t-cal values fall below 2 as a threshold, except that of EMR (2.376) which falls above t-tab of 2. The matching probability values of 0.144, 0.008, and 0.319 were also displayed. Because the p-values for the predictors (STC and HSC) are higher than the 0.05 significant threshold, it is therefore possible to consider them as statistically not significant. However, the p-value for EMR (0.008) is considered to be statistically significant as the value falls below 0.05 threshold.

Additionally, the regression's R-squared statistic was 0.3711, meaning that STC, EMR, and HSC may account for 37.11% of the overall changes in ROE, while other factors not included in this study can account for the remaining 62.89%. The F-statistic, which was displayed as 1.912 with a probability value of 0.0440, is one of the important data points in the table above, which also displays the variance analysis of the regression. The fact that the p-value is below the 0.05 cutoff indicates that the study's model is statistically significant. However, the Durbin-Watson statistic result, which falls between 1.5 and 2.5, was 2.412, suggesting that auto-correlation is absent. This suggests that the study's variables are in excellent working order.

Interpretation of Results

Test of Hypotheses

Ho_1: Staff training cost has no significant on return on equity of listed oil and gas companies in Nigeria

According to the previously provided regression table, the staff training cost (STC) t-cal value was 1.477, with a corresponding p-value of 0.144. Because the value is over the 0.05 significant threshold, it is considered statistically not significant. Thus, the analysis accepts the above-stated null hypothesis and affirms that staff training cost has no significant effect on return on equity of listed oil and gas companies in Nigeria.

Ho_2: Employee remuneration does not significantly affect return on equity of listed oil and gas companies in Nigeria

Additionally, the regression table's EMR p-value of 0.008 was deemed statistically significant as the value is below the significance level of 0.05. As a result, the study refuse to accept the second null hypotheses stated above and therefore restates that employee remuneration has significant effect on return on equity of listed oil and gas companies in Nigeria.

Ho_3: Health and safety cost has no significant effect on return on equity of listed oil and gas companies in Nigeria

The health and safety cost p-value of 0.319 found in the regression table was deemed statistically not significant since it was higher than the significance level of 0.05.Thus, the study fails to refute the above-stated null hypothesis and concurs that health and safety cost has no significant effect on return on equity of listed oil and gas companies in Nigeria.

Discussion of Results

The study looked at the connection between human resource accounting and the financial performance of Nigerian listed oil and gas companies. However, the study discovered that although some of the empirical studies looked at for this inquiry yielded different results, others are relevant to the study's conclusion, as listed below:

The results showed that the return on equity of listed oil and gas businesses in Nigeria is not significantly impacted by training and development costs. The results of Akinlade & Adegbie (2020), Enekwe et al. (2023), Adewumi et al. (2023), and Omole et al. (2017) are inconsistent with the results of Akinlade & Adegbie (2020), Akinjare et al. (2018), and others.

Furthermore, it was demonstrated that employee compensation had discernible effect on the return on equity of Nigerian listed oil and gas businesses. The results of Kankpang et al. (2024), Doutimiareye & Major (2024), Ochei et al. (2023), and Adewumi et al. (2023) are in agreement with this conclusion; however, Enekwe et al. (2023), Adewumi et al. (2023), Akinlade & Adegbie (2020), and Akinjare et al. (2018).

In conclusion, it was discovered that health and safety expenses had no discernible impact on the return on equity of Nigerian listed oil and gas businesses. This is consistent with research by Ochei et al. (2023), Enekwe et al. (2023), and Doutimiareye & Major (2024). However, it is not consistent with research by Omole et al. (2017), Akinlade & Adegbie (2020), and Akinjare et al. (2018).

5. CONCLUSION AND RECOMMENDATIONS

The study comes to the following conclusion in accordance with the research findings:

Staff training costs (STC) had no significant effect on return on equity of Nigerian listed oil and gas businesses, according to the regression findings, as the p-value was found to be higher than the significant threshold of 0.05. As a consequence, the study comes to the conclusion that stakeholders of Nigerian listed oil and gas companies cannot forecast the return on equity of the companies under study based on the cost of staff training.

The findings also demonstrated that employee remuneration (EMR) had discernible effect on the return on equity of Nigerian listed oil and gas companies. The study concludes that employee remuneration of the selected oil and gas companies listed on the Nigerian Exchange Group is effectively managed, thereby having a significant impact on the firms' return on equity.

Last but not least, the regression table reveals that the probability value of the health and safety cost (HSC) is higher than the 0.05 significant threshold, indicating that it is statistically not significant in connection to return on equity. The study comes to the conclusion that the return on equity of listed oil and gas businesses in Nigeria cannot be predicted by present or prospective investors based only on health and safety expenses.

In line with the study's findings and conclusion drawn earlier, to the following recommendations were offered:

The results revealed that financial performance of listed oil and gas firms in Nigeria is not significantly impacted by staff training expenses. In order to boost productivity, which in turn enhances the firms' financial performance, the study advises management of Nigerian listed oil and gas companies to provide their workers with suitable training and comfortable working circumstances. In order to maintain a competitive advantage in the modern corporate environment, management should also take into account the setup and development expenses of human resources as strategic investment possibilities.

To increase the information content of financial statements and the value of oil and gas firms, accounting standard-setting authorities should continue to assess the present accounting practices related to employee remuneration and continue to educate and as well provide clear reasons why reporting of such expenditures is vital.

The research also suggests that management of publicly listed oil and gas businesses create a culture of capitalizing and reporting any investments or costs connected to health and safety in order to enhance their respective financial performance.

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