AN EMPIRICAL INVESTIGATION INTO THE EFFECT OF HUMAN RESOURCES ACCOUNTING ON FINANCIAL PERFORMANCE: EVIDENCE FROM QUOTED OIL AND GAS COMPANIES IN NIGERIA

AINA GRACE OLUWATOSIN
DEPARTMENT OF ACCOUNTING & FINANCE, MCPHERSON UNIVERSITY SERIKI-SOTAYO. OGUN STATE
Corresponding email: gracytonnex@gmail.com

OYETUNJI OLUWAYOMI TAIWO
DEPARTMENT OF ACCOUNTING & FINANCE, MCPHERSON UNIVERSITY SERIKI-SOTAYO. OGUN STATE

LAWAL BABATUNDE AKEEM
DEPARTMENT OF ACCOUNTING & FINANCE, MCPHERSON UNIVERSITY SERIKI-SOTAYO. OGUN STATE

&

KOLAPO DAMILOLA
DEPARTMENT OF ACCOUNTING & FINANCE, MCPHERSON UNIVERSITY SERIKI-SOTAYO. OGUN STATE

ABSTRACT
With the growing recognition of human capital as a strategic asset, there is increasing concern about the extent to which investments in human resources translate into improved financial outcomes, particularly within the oil and gas sector. Despite this importance, empirical evidence on the relationship between human resource accounting (HRA) practices and financial performance in Nigeria remains limited and inconclusive. This study examined the effect of human resources accounting (HRA) practices on the financial performance of quoted oil and gas companies in Nigeria. The study adopted an ex post facto research design and relied on secondary data sourced from the published annual reports and accounts of selected quoted oil and gas companies listed on the Nigerian Exchange Group for the period 2015–2024. HRA practices are proxied by recruitment cost, training and development cost, and employee welfare cost, while financial performance is measured using Earnings per Share (EPS) and Net Profit. The data were analysed using descriptive statistics, correlation analysis, and panel data regression techniques, including fixed and random effects models. Relevant post-estimation and diagnostic tests were conducted to ensure the robustness and reliability of the results. The findings revealed that HRA practices have a significant effect on the financial performance of quoted oil and gas companies in Nigeria. The study concluded that effective investment in human resources enhances firm profitability and market valuation. It therefore recommended that there should be a budgetary allocation for training and development programs, oil and gas companies strengthen human capital investment strategies and adopt improved human resources accounting and disclosure practices to enhance financial performance and stakeholder confidence.

Keywords: Earnings per Share, Financial Performance, Human Resources Accounting, Net Profit Margin, Recruitment Cost, Training and Development Cost.
Word Count: 264

Introduction

The relevance of human capital as a strategic driver of corporate competitiveness has led to human resource accounting (HRA) being regarded as a crucial aspect of corporate reporting which has become of global concern. The organizations around the globe have changed their perception of human resources as a cost to the administration to that of intangible assets that can create financial returns in the long run. Experts like William and Barnes (2020) hold the view that companies that invest in human capital strategy at a higher level have much higher and better market valuation particularly in knowledge intensive and high risk markets like oil and gas. This international trend goes in line with the reconsideration of

intangible assets according to the IFRS requirements and the new demands of sustainability and integrated reporting. Consequently, there is a growing interest by the multinational corporations in embracing the practice of HRA to promote transparency, investor and corporate governance.

In developed economies, HRA application has particularly acquired pertinence to the sectors that are highly technical, fluctuating in terms of prices, and which demand safety levels of high intensity. Investigations by Torres (2022) and Chang and Lee (2021) reveal that oil and gas multinationals in North America, Europe, and Asia attach much importance to the quality of recruitment, technical training, the safety of the workforce, retention of talents and career development as it directly affects the stability of operations and financial performance. The mobility of the technical labour in the global petroleum sector is extremely high, thus compelling companies to invest intensively in employee development, which studies have demonstrated to minimize downtime, enhance operational efficiency, and increase financial returns (Hammoudeh & Reboredo, 2020).

As the biggest oil producer in Africa, Nigeria is an interesting location to carry out HRA research given that it has a unique set of operational risks, labour intensity, and a petroleum value chain that is complex. The oil and gas sector is a significant part of the state income and GDP, but the business has problems with operational volatility, labor shortage, and reporting gaps. As Nuhu (2023) and Ogbonna and Eze (2020) noted, even though human capital is important to the oil industry in Nigeria, human resource investments are underreported or not consistently reported by most firms, thus restricting the ability of investors to evaluate the productivity of firms and their long-term value creation.

Nevertheless, even in the presence of such global acceptance, Human Resource Accounting (HRA) is still a poorly institutionalized concept in most developing economies, which causes a systematic difficulty in predicting changes in financial performances of firms including Earnings per Share (EPS), Net Profit Margin (NPM), Tobin Liability (Q), and Share Price (Owolabi & Makinde, 2022).

In Africa, it has been indicated that oil and gas firms find it challenging to embrace systematic HRA practices because of inadequate regulations, irregular disclosure practices, and a lack of knowledge of the economic impact of human capital investments (Mensah & Ofori, 2021). This loophole has hampered the capability of the stakeholders to determine the real value and profitability of firms and this has created a gap between the human capital investments and the real financial gains. Consequently, the African oil and gas companies are still facing unstable EPS, unstable profit margins, and unstable market valuation that cannot be easily justified by the traditional accounting systems (Kibet & Muthoka, 2020).

In Nigeria, the extent of the problem is even worse since the country heavily depends on the oil and gas industry as it is a major contributor of national revenue, foreign exchange earnings and that of employment. Although human resources play a strategic role in improving the efficiency in operations, safety performance and technological innovation, HRA has not been sufficiently incorporated in financial reporting systems of oil and gas companies in Nigeria (Adewumi & Adedokun, 2022). As a result, decision-makers do not have sufficient information regarding the economic worth of investments on employees like training, development, welfare and competency improvement.

Therefore, the main objective of the paper is to examine the effect of human resources accounting on financial performance of quoted oil and gas companies in Nigeria. The specific objectives are to:

i. examine the effect of human resources accounting practice on Earnings Per Share of quoted oil and gas companies in Nigeria.
ii. investigate the impact of human resources accounting practice on Net Profit Margin of quoted oil and gas companies in Nigeria.

According to international studies, excellent accounting and reporting of the human

capital are associated with the organizations that enjoy BETTER market valuation, greater profitability, and longer competitive edge (Becker & Huselid, 2020; Marimuthu & Arokiasamy, 2021).

Literature Review

Conceptual Review

Financial Performance

Financial performance is widely considered to be the degree to which a company can meet its financial goals by appropriately using resources. Financial performance is defined as the capacity of the firm to be able to come up with sustainable profits in the long term (Okoro & Nwakanma, 2019). Agbaeze and Udemba (2020) explained financial performance in the petroleum context as the quantification of the economic outputs, which are based on the exploration, production, and distribution processes. On the same note, Chukwuma and Hassan (2020) indicated that financial performance evaluates the efficiency with which capital-intensive activities of the firm are handled, especially in unstable energy markets. Daramola and Oloruntobi (2020) asserted that it shows the profitability, liquidity, and the financial strength of oil and gas companies in general.

Earnings per Share (EPS)

EPS is one of the most potent measures of profitability of firms and wealth generation of shareholders each since it is the amount of profits that are attributed to an individual share. The EPS is also sensitive with respect to the earnings, capital structure, and outstanding shares of the company. Owolabi (2020) claimed that EPS is a very important indicator of the financial well-being of the companies operating in volatile sectors since they combine returns on investors and profitability at the same time. Nguyen et al. (2021) explained that EPS is the amount of the profits of an entity distributed to every outstanding share, and it is directly proportional to the financial performance in terms of the investor. In the same vein, Suseno et al. (2024) noted that EPS is a decisive factor in stock valuation and investor sentiment in capital-intensive industries, such as oil and gas, where fluctuations in earnings are usual. It is measured as:

$$\text{EPS} = \frac{\text{Profit After Tax}}{\text{Outstanding Shares}}$$

Net Profit Margin (NPM)

NPM measures the capability of a company to generate actual profit out of revenue. We tend to define (NPM) as an accounting-based measure used in the estimation of a percentage ratio of net earnings to total revenue. According to Eze and Okonkwo (2019), NPM is a ratio to evaluate the profit margin that a company achieves after covering all the costs of the business and thus is essential in evaluating cost efficiency. It embodies effectiveness of operations and cost management. According to Ibrahim and Abdullahi (2022), NPM is a strong indicator of profit sustainability since it includes all costs that comprise cost of sales, overhead costs, and taxes. According to Okafor and Olayemi (2019), NPM is a manifestation of the capability of a firm to cover its expenditures and make a profit based on its main operations. In the oil and gas sector, where operating costs are fluctuating on the basis of regulatory pressures and environmental compliance, NPM is used as an indicator of cost control and pricing approach.

It displays the ratio of revenue that will be left as profit after all expenses:

$$\text{NPM} = \frac{\text{Net Profit}}{\text{Total Revenue}}$$

Human Resource Accounting (HRA)

The conventional financial reporting model is based on the physical and financial aspects of assets with the exclusion of intangible assets like the human capital. Nevertheless, in the context of world economies becoming more knowledge-based, there is a clear appreciation of the fact that organisational success revolves around the aggregate skills, experiences, and competencies of the employees. The human resource accounting (HRA) came up as a tool to measure and report the economic value of people in organisations. Human factor is an inseparable ingredient of any type of production mechanism, including both extremely professional and less professional

employees (Ofurum & Adeola, 2018; Ogunbiyi-Davies et al., 2023).

Recruitment Cost

The recruitment cost, which is one of the most important aspects of Human Resource Accounting, has received a lot of attention as a strategic investment as opposed to being an administrative cost. Obakpolor and Idubor (2021) stated that the cost of recruitment involves all the expenses that a company spends to attract, select, and onboard new employees and should be counted as a part of the intangible assets of an organization. Saraswat and Sharma (2024) also believed that the cost of recruitment will show how an organization is dedicated to the acquisition of high-quality human capital, and this directly determines the long-term financial performance. Similarly, Akinlade and Adegbie (2020) highlighted that recruitment spending in Nigerian companies, especially in the oil and gas industry, is essential to maintain operations efficiency and must be disclosed in financial reports in HRA schemes.

Training and Development Cost

According to Armstrong (2015) as quoted by Beida (2024), training and development expenditures investments in training and developing skills, knowledge, and capabilities of employees are a formal, systematic modification of that behavior through learning. This is because of internal training programs, seminars, certifications and workshops. Akinlade and Adegbie (2020) noted that these expenses are to be capitalized and amortized across anticipated service period of the employee as it brings about economic benefits in the future. According to Saraswat and Sharma (2024), training cost refers to a purposeful spending on human capital that enhances organizational responsiveness and innovation. Training is not a luxury in the oil and gas sector where technology is shifting quickly, safety measures are being implemented and regulations are being followed to ensure that the operations of the companies are remaining intact and limiting the amount of risk involved.

Welfare and Facilitation Cost

Welfare and facilitation cost is defined as the cost which is spent in wellbeing of the employees such as health insurance, housing, transportation, safety gears, and recreational facilities. Obakpolor and Idubor (2021) defined it as one of the key elements of HRA that will demonstrate the organizations concern with employee satisfaction and retention. Welfare cost is expenditure that will guarantee the well-being, safety, and gratification of the employees. They are medical insurance, pensions, housing schemes and other social benefits. Sufficient welfare programs decrease absenteeism, create loyalty, and increase productivity (Oluwole & Nnamani, 2022). Saraswat and Sharma (2024) claimed that the welfare costs are to be considered as the strategic investments which decrease the turnover and increase the morale and productivity. Welfare provisions are not only welcome but also necessary in oil and gas industry where employees tend to work remotely, in dangerous or offshore conditions as this also helps to maintain worker motivation and safety.

Employee Value Reporting

Employee value reporting is defined as a process that entails the release of both the qualitative and quantitative data about the workforce of a firm in their financial reports or sustainability reports. These disclosures can include the workforce diversity, employee development, human capital spending, or staff productivity. According to Obakpolor and Idubor (2021), EVR is a HRA strategic extension where the productivity, retention, innovation, and value added measures of employees are reported in financial statements. Companies disclosing human capital information voluntarily give good signals to investors regarding the quality of management and corporate governance (Okafor & Eze, 2023). Lev and Schwartz (2019) emphasized that open reporting boosts investor confidence and minimizes information asymmetry and improves valuation of the firm. The reporting of employee value is an indication of the firm's dedication to its human capital growth and enhances performance

metrics by the market like the Q and share price which are both based on market performance.

Theoretical Review

Resource-Based View (RBV) Theory

Resource-based theory was conceptually initiated by Birger Wernerfelt, who defined it in 1984, and elaborated and improved the concept of the theory by Jay B. Barney and a number of other researchers in 1991. This theory assumes that internal capabilities of firms and their resources play lead role in the ability of a company to attain and maintain a competitive advantage. Barney (1991) came up with four main attributes of a resource as strategically valuable: the resources should be valuable, rare, impossible to imitate and non-substitutable. Resource-based View (RBV) argued that it is internal organizational resources that would make a firm achieve competitive advantage rather than the external market conditions. In this viewpoint, a firm, which has distinct and un-replicable resources, can have high chances of embedding high performance in the long run. Amongst these internal resources, human resources are considered to be vital strategic resources that include skills, knowledge, expertise and competencies of the employees.

Human Capital Theory (HCT)

Human capital theory is an economic concept that continues to explain the revenue of individuals as they can improve their productivity through innovation of their knowledge, skills and abilities. It was a theory coined by an American economist by the name Gary Becker in 1962 and he underscored the need to invest in people as one of the ways of enhancing economic performance. This viewpoints brings out the association of human input and organizational production illustrating how, enhancement of human capital leads to efficiency in the work place in the contemporary organizations. This theory is based on the notion that a person has qualities which could be enhanced as time progresses and utilized constructively in the workplace. These qualities are measurable even though they are intangible in nature with an impact of organizational performance and financial results.

Signaling Theory

Spence (1973) initially introduced the principle of signaling theory in the financial management and examined how signals are used in the labor market as a marker of economic conditions. The use of a signal in a corporate setting implies information that a company tells those outside the company concerning its current condition. Signaling theory is especially useful when the two parties involved in such interactions have unequal information. One of its uses in the field of accounting is to assess the private information that the management can disclose to shareholders. Managers tend to disseminate positive news to improve the shareholder value. These positive releases will allow the investors to reestablish an upward revision in their expectations about the earnings and performance expectations of the company in the future, which will lead to purchasing the company shares. However, when the actual performance becomes lower than the forecasts, according to the principles of signaling theory, investors will believe it is a bad news so they will reduce their expectations and may even sell their stocks (Ambarwati, 2008).

Stakeholders Theory

The stakeholder theory stressed the importance of organizations not only to shareholders but also to a wide group of stakeholders that include the employees, customers, suppliers, regulators and communities (Freeman, 1984; Donaldson & Preston, 1995). It is a theory that suggests that companies can attain sustainable success by striking a balance between the interests of all parties as opposed to concentrating on concerned profit maximization. The idea of human resource accounting (HRA) agreed with this view and takes into consideration the employees as important stakeholders whose development, welfare, and value creation should be linked to performance in an organization.

Theoretical Framework

This paper is grounded on the human capital theory to give a multidimensional approach to explaining the role of the human resource

accounting practices in improving the financial performance of quoted oil and gas industries in Nigeria. It is firmly based on the human capital theory that assumes that individuals have knowledge, skills, experience, and abilities that bring about organizational productivity and economic value. The theory opines that training, recruitment, development, and employee welfare investments contribute to productive capacity of the working population hence enhances organizational performance.

Empirical Review

Alshammari (2022) investigated the impact of human capital efficiency on the earnings performance of the listed oil and gas companies in the Gulf Cooperation Councils (GCC) countries. The research design used was ex-post facto research design and the analysis tools were panel regression analysis and secondary data collected in the form of annual reports between 2014 and 2020. The results indicated that the human capital efficiency affects the Earnings per Share in a positive and statistically significant way, showing that the effectiveness of human capital in firms in terms of developing skilled and productive workforces has a positive effect on the earned results. The author claimed that in technical sectors of the economy like the oil and gas industry, employees possessing training and expertise in technical areas boost operational efficiency and eliminate expensive mistakes that lead to better shareholder gains. The study suggested that oil and gas companies need to use structured human capital efficiency measurement systems as a component of their strategic and financial performance assessment systems.

Khan and Ali (2020) explored the connection between human capital investment and the earnings performance of the Pakistan Stock Exchange-listed firms of the energy sector. The study employed a quantitative research methodology and multiple regression analysis of panel data to conclude that the training and development expenditure has a strong positive effect on the Earnings per Share. The authors have concluded that human resource investment will enhance the productivity of the employees and their innovativeness which in turn increases the profitability and the profit that can be distributed to shareholders. This study suggested that energy companies ought to maintain a long-term investment in employee development and calculate human capital cost in the financial budget instead of treating them as cost of discretion.

The article by Ogbonna and Eze (2020) concentrated on the oil and gas sector in Nigeria by analyzing how the disclosure of human resource accounting influences the Earnings per Share of the quoted companies. An ex-post facto study design and panel data regression were used in the study with data obtained in annual financial statements. The results showed that companies which report costs and information regarding human resource have very high EPS in comparison to companies with weak disclosures. The authors explained this finding by the increased transparency and the lowered information asymmetry which boosts investor confidence and firm performance. The research suggested the implementation of compulsory human resource accounting disclosure criteria in Nigeria to enhance the earnings performance and corporate accountability.

Bello and Enete (2019) examined how the human resource investment influenced the profitability of listed oil and gas corporations in Nigeria based on the Net Profit Margin as the significant measure of financial performance. The research design was ex-post facto research and the panel regression analysis to secondary data obtained in the annual reports of the firms. The conclusions indicated that employee training, safety programme, and welfare expenditure enhance Net Profit Margin substantially by eliminating inefficiencies in the operations and lowering the number of production disruptions, as witnessed in the oil and gas industry. The authors put a lot of focus on the fact that human resource investment improves cost discipline and operational effectiveness, which increases profit margins. The research suggested that the oil and gas companies ought to make human capital development strategies institutional in profitability management.

Chang and Wu (2020) assessed the correlation between human capital efficiency and the profitability of energy companies that are listed in China. The study determined that there is statistically significant positive relationship between human capital efficiency and Net Profit Margin, using Value Added Intellectual Coefficient (VAIC) model and panel data regression methods. The authors described that professional and experienced workers enhance the accuracy of production, minimize wastes, and maximize the use of resources resulting in increased profit margins. The analysis suggested that energy companies should include the indicators of human capital efficiency in the internal control systems of costs and performance measurements.

Abdul and Isiaka (2018) analyzed how the level of human capital development affects profitability in listed oil and gas companies in the developing economies. Through a panel data analysis, the research revealed that the Net Profit Margin is significantly enhanced with investment in an employee training and safety programmes. The authors made the conclusion that human capital development increases the productivity and operational losses in high-risk industries are decreased. The research suggested more focus on human capital investment as the way of enhancing profitability in oil and gas companies.

The study by Mohammed and Sule (2024) examined how spending on employee welfare impacts the profits of the oil and gas firms in Nigeria. The research design used was an ex-post facto research design and ordinary least squares regression analysis. The results obtained showed that the effects of welfare spending on Net Profit Margin were significant and positive as it boosts employee morale and decreases absenteeism. The authors suggested strategic welfare investment as one of the mechanisms of maintaining profit margins.

Methodology

Ex-post facto research design was adopted. The construction offers some orderly manner of analyzing the secondary financial information and testing the hypotheses without interference to the corporate operation. The sample that was used in this study is the entire list of quoted oil and gas companies in the Nigerian Exchange Group (NGX) by December 2024. The NGX Fact-book (2024) indicated that the sub-sector of Oil and Gas has twelve (12) companies. These companies are registered in an upstream, midstream, or downstream subsector and are required to release audited financial statements annually in line with the IFRS, the NGX regulations, and the CAMA 2020 requirements. Oil and gas companies that are quoted are the most transparent part of the Nigerian petroleum industry, and it is suitable to analyze them empirically.

Model Specification

$Y = f(X)$

Where Y = Dependent Variable (Financial Performance FP)

X = Independent Variable (Human Resources Accounting HRA)

$Y = y_1, y_2$

y_1 = Earnings per Share (EPS)

y_2 = Net Profit Margin (NPM)

$X = x_1, x_2, x_3, x_4$

x_1 = Recruitment Cost (RC)

x_2 = Training and Development Costs (TDC)

x_3 = Welfare Facilitation Cost (WFC)

x_4 = Employee Vale Reporting (ER)

$EPS = \beta 0 + \beta_1 RC_{it} + \beta_2 TDC_{it} + \beta_3 WFC_{it} + \beta_4 ER_{it} + \varepsilon_{it}$ …… Equation 1

$NPM = \beta 0 + \beta_1 RC_{it} + \beta_2 TDC_{it} + \beta_3 WFC_{it} + \beta_4 ER_{it} + \varepsilon_{it}$ …… Equation 2

Results and Discussion

Test of Hypotheses and Discussion of Findings

Research Hypothesis one: Human resource accounting practices does not significantly affect earnings per share

Table 1: Regression result of Model One

Dependent – EPS	**Cross-sectional time-series FGLS regression**			
	Coeff	St.Err	z-value	p-value
CONSTANT	-48.229	11.004	-4.38	0.000
RC	6.757	1.578	4.28	0.000
TDC	0.441	0.184	2.400	0.016
WFC	1.041	1.141	-0.910	0.361
ER	0.261	0.581	-0.450	0.653
Adj R-squared	0.266			
Wald Chi2(4)	F(4, 115) = 41.98 (0.000)			
Hausman Test	Chi2(4)= 1.54 (0.8193)			
Breusch-pagan LM Test (RE)	Chiabr2(01) = 0.00 (1.000)			
Heteroskedasticity Test	Chi2(1) = 65.88 (0.000)			
Serial Correlation Test	F (1, 5) = 70.525 (0.004)			

Source: Author's Computation (2026)

Table 1 shows the findings from Model 1. The selection of the most suitable estimation method for this study was guided by several diagnostic tests. Specifically, the Hausman test was employed to assess whether the Fixed Effects (FE) or Random Effects (RE) model was more appropriate. The test's null hypothesis assumes that the differences in coefficients between the FE and RE models occur randomly rather than systematically. The Chi-square test produced a value of 1.54 with an associated p-value of 0.8193, which is higher than the 5% significance threshold. This indicates that the null hypothesis could not be rejected, suggesting that the Random Effects (RE) model provides a better fit for the data. This conclusion was further reinforced by the Breusch-Pagan Lagrangian Multiplier (LM) test, which yielded a Chi-square value of 0.00 and a p-value of 1.000.

Consequently, the Pooled Ordinary Least Squares (POLS) regression appears more appropriate than the random effects approach.To examine whether the variance of the error terms was constant, a heteroskedasticity test was conducted. The test returned a Chi-square value of 65.88 with a p-value of 0.000, indicating the presence of heteroskedasticity, as the p-value is below the 0.05 significance level. Additionally, a serial correlation test was performed, producing an F-statistic of 70.525 and a p-value of 0.004, which points to the presence of first-order autocorrelation.

Overall, the diagnostic assessments revealed econometric problems, including heteroskedasticity, serial correlation, and cross-sectional dependence. These issues necessitated the application of a more robust estimation technique. As a result, the Feasible Generalized Least Squares (FGLS) method was employed, as it accounts for both heteroskedasticity and autocorrelation, ensuring that the regression results are reliable and valid.

Interpretation of Regression Results

The regression model evaluates the effect of Human Resource Accounting Practices (HRAP) components on Financial Performance (FP), expressed as:

$EPS_{it} = \beta_0 + \beta_1 RC_{it} + \beta_2 TDC_{it} + \beta_3 WFC_{it} + \beta_4 ER_{it} + \varepsilon_{it}$ ----------Model 1

EPS_{it} = -48.229 + 6.757RC_{it} + 0.441TDC_{it} +1.041WFC_{it} +0.261ER_{it}

The regression analysis showed the following results:

The coefficient for RC was 6.757, indicating a positive and statistically significant relationship with earnings per share. This suggests that a one percent increase in RC leads to a 6.757 percent increase in EPS, as indicated by the p-value of 0.000, which is less than the 5% significance threshold.

The coefficient for TDC was 0.441, indicating a positive and statistically significant relationship with EPS. This means that a one percent increase in TDC is associated with a 0.441 percent increase in EPS. The statistical significance of this relationship is confirmed by the p-value of 0.016, which is less than 0.05, showing that TDC significantly contributes to domestic EPS. The coefficient for WFC was 1.041, suggesting a positive relationship with EPS. However, this relationship is not statistically significant, as evidenced by the p-value of 0.361, which exceeds the 5% significance level. The value of the coefficient implies that 1% increase in WFC revenue is associated with a 1.041% increase in EPS, holding other factors constant.

The coefficient for ER was 0.261, also indicating a positive but statistically insignificant relationship with domestic debt, meaning that 1% increase in ER is associated with a 0.261% increase in EPS, holding other variables constant. The regression model as a whole was statistically significant, as evidenced by the Wald Chi-square statistic of 41.98 with a p-value of 0.000. This indicates that the independent variables collectively have a significant impact on earnings per share which implies that human resource accounting practices has significant effect on earnings per share. The adjusted R-squared value of 0.266 suggests that approximately 26.6 % of the variation in EPS is explained by all the four constructs of human resource accounting practices (RC, TDC, WFC, and ER) in the model.

Decision

At the 5% level of significance, the result of the Wald-statistics of 41.98 with a degree of freedom of F(4, 115) and having a probability value of 0.000 which is less than the 5% chosen significant level of the study, this study thus decide that the null hypothesis for model One which states that “human resource accounting practices does not significantly affect earnings per share” be rejected while accepting the alternate hypothesis and concluded that “human resource accounting practices significantly affect earnings per share”.

Discussion of Findings

The study found that HRA practices have a significant positive effect on earnings per share. The significant positive impact of recruitment cost (RC) aligns with the findings of Salihu and Garba (2021) who posited that optimized recruitment correlates with improved profitability metrics. It also supports the Resource Based View confirming that investment in acquiring quality, specialized talent directly enhances earnings capacity. The significant effect of Training and Development Cost (TDC) corroborates the work of Agbo and Ekwe (2020); Kareem and Adeola (2022) who found that training investments enhance employee productivity and technical capability leading to higher operational efficiency and consequently improved EPS.

The insignificant effect of WFC and EVR with EPS presents a contrasting result. This contrast with studies like Mohammed and Sule (2024) which argued that welfare spending improves morale and productivity and Nuhu (2023) which found that employee value reporting enhances EPS by improving motivation and signaling value. A possible explanation for this discrepancy in the Nigerian oil and gas context is that the benefits of welfare and value reporting may be long term and intangible while EPS is a short term accounting metric heavily influenced by volatile oil prices and immediate operational costs. Their effect might be more pronounced on market based indicators like Tobin’s Q than on immediate earnings.

Test of Hypothesis Two

Research Hypothesis Two: Human resource accounting practices does not significantly affect earnings per share

Table 2: Regression result for Model Two

Dependent – NPM	**Fixed effect Regression with Driscoll-Kraay Standard Error**			
	Coeff	St.Err	t-stat	p-value
CONSTANT	1.111	1.341	0.830	0.423
RC	0.795	0.150	5.300	0.000
TDC	0.007	0.124	0.580	0.572
WFC	0.050	0.060	-0.830	0.421
ER	0.160	0.047	3.390	0.005
Adj R-squared	0.719			
F-Stat	F(4, 115) = 75.62 (0.000)			
Hausman Test	Chi2(4)= 40.65 (0.000)			
Testparm	F(5,61) 18.09 (0.000)			
Heteroskedasticity Test	Chi2(1) = 17.93 (0.0064)			
Serial Correlation Test	F (1, 5) = 142.458 (0.001)			
Cross sectional Dep	Chi2(15) = 45.884 (0.0001)			

Source: Author's Computation (2026)

Interpretation

Table 2 presents the results for Model 2. The choice of the most appropriate estimation technique for this study was guided by various diagnostic tests. The Hausman test was employed to compare the Fixed Effects (FE) and Random Effects (RE) models to determine the appropriateness of the FE model. In the test, the null hypothesis is that the difference in coefficients between the FE and RE model do not have a systematic difference. The findings showed that the Chi-square value is 40.65 with a p-value of 0.000, which does not exceed the 5% mark. Consequently, the null hypothesis was rejected, indicating that the FE model is more suitable for the model estimation. This was confirmed by conducting a Testparm test and with the F-statistics of 18.09 with probability value of 0.000, which is less than the chosen significance level of 5%, it corroborates the outcome of the Hausman test and thus, Fixed effects is considered appropriate for the estimation.

Tests for heteroskedasticity were performed to assess whether the variance of the error terms is constant. The heteroskedasticity test produced a Chi-square value of 17.93 with a p-value of 0.0064, suggesting the presence of heteroskedasticity since the p-value is less than 0.05. Moreover, the model has been assessed in terms of serial correlation with Serial Correlation Test, the F-statistic was equal to 142.458 with p-value equal to 0.001. This means that there is first-order autocorrelation. Moreover, cross-sectional dependency was tested and the findings proved that it exists with Chi-square of 45.884 and p-value of 0.0001. Such diagnostic tests displayed econometric problems such as heteroskedasticity, serial correlation, cross-sectional dependence, and thus, there was a need to implement a strong estimation method. In the view of these diagnosis results, the regression analysis was carried out on the Fixed Effects (FE) model in which cross-sectional dependence, heteroskedasticity, and autocorrelation were corrected by Driscoll-Kraay

standard errors. This makes sure that the findings are strong and sound.

Interpretation of Regression Results

The regression model evaluates the effect of Human Resource Accounting Practices (HRAP) components on Financial Performance (FP), expressed as:

$NPM_{it} = \beta_0 + \beta_1 RC_{it} + \beta_2 TDC_{it} + \beta_3 WFC_{it} + \beta_4 ER_{it} + \varepsilon_{it}$ ----------Model 2

$NPM_{it} = 1.111 + 0.795 RC_{it} + 0.007 TDC_{it} + 0.050 WFC_{it} + 0.160 ER_{it}$

The regression analysis showed the following results:

The coefficient for RC was 0.795, indicating a positive and statistically significant relationship with net per profit. This suggests that a one percent increase in RC leads to a 0.795 percent increase in NPM, as indicated by the p-value of 0.000, which is less than the 5% significance threshold. The coefficient for TDC was 0.007, indicating a positive and statistically significant relationship with NPM. This means that a one percent increase in TDC is associated with a 0.007 percent increase in NPM. The statistical significance of this relationship is confirmed by the p-value of 0.572, which is less than 0.05, showing that TDC significantly contributes to domestic NPM.

The coefficient for WFC was 0.050, suggesting a positive relationship with NPM. However, this relationship is not statistically significant, as evidenced by the p-value of 0.421, which exceeds the 5% significance level. The value of the coefficient implies that 1% increase in WFC revenue is associated with a 0.050% increase in NPM, holding other factors constant. The coefficient for ER was 0.160, also indicating a positive but statistically insignificant relationship with domestic debt, meaning that 1% increase in ER is associated with a 0.160% increase in NPM, holding other variables constant.

The regression model as a whole was statistically significant, as evidenced by the Wald Chi-square statistic of 1.111 with a p-value of 0.000. This indicates that the independent variables collectively have a significant impact on net profit margin which implies that human resource accounting practices has significant effect on net profit margin.

The adjusted R-squared value of 0.719 suggests that approximately 71.9 % of the variation in NPM is explained by all the four constructs of human resource accounting practices (RC, TDC, WFC, and ER) in the model.

Decision

At the 5% level of significance, the result of the Wald-statistics of 1.111 with a degree of freedom of F(4, 115) and having a probability value of 0.000 which is less than the 5% chosen significant level of the study, this study thus decide that the null hypothesis for model Three which states that “Human resource accounting practices does not significantly affect net profit margin” be rejected while accepting the alternate hypothesis and concluded that “Human resource accounting practices significantly affect net profit margin”

Discussion of Findings

The results indicate that HRA practices significantly affect Net Profit Margin. Recruitment cost and Employee value reporting were significant drivers while TDC and WFC were positively but insignificant. The strong significant impact of RC on NPM reinforces the findings of Bello and Enete (2019) who emphasized that strategic human resource investment reduces operational inefficiencies and minimizes costly disruptions thereby directly improving profit margins. The significant positive effect of employee value reporting supports signaling theory and aligns with Torres (2022) who found that transparency in human capital disclosure builds stakeholder trust and can lead to better cost management and operational discipline reflected in a healthier NPM.

The insignificant result for training cost in relation to NPM is intriguing and contrasts with studies like Adeleye and Ogunrinola (2023) who found a long-run positive effect. This may suggest that in the Nigerian oil and gas sector the high and immediate expense of technical training may pressure the profit margin in the short term with its return materializing over a longer horizon or being captured in other metrics like EPS. The

insignificance of welfare cost similarly suggests its direct, measurable impact on cost of sales and operational expenses within a fiscal year.

Conclusion and Recommendations

From the results and findings the study concluded that for hypothesis one human resource accounting practices had a significant effect on earnings per share thereby answering question one and achieving objective one. For hypothesis two human resource accounting practices had a significant effect on net profit margin thereby answering question two and achieving objective two. The study finally concluded that human resource accounting practices has significant effect on Financial Performance of oil and gas companies in Nigeria.

Following the results and findings, the following were recommended:

i. Management of oil and gas companies should prioritize and increase budgetary allocation for targeted training and development programs that directly address critical technical skill gaps identified in operational risk assessments as these have shown a direct payoff in EPS.

ii. The financial reporting council of Nigeria should initiate a project to develop a national guideline on human capital disclosure that will provide principles-based framework for the recognition, measurement, and reporting of human capital. The Nigerian Exchange Group should also amend its listing rules to include human capital disclosure as a key component of its reporting requirements encouraging best practice towards improving the net profit margin of oil and gas companies

Contribution to Knowledge

The paper contributed to knowledge in the following ways:

Concepts: The study enriches the conceptual understanding of human resource accounting (HRA) within the context of Nigeria's oil and gas sector. Although existing literature acknowledges the relevance of HRA, there is still conceptual ambiguity regarding how recruitment cost, training and development cost, welfare and facilitation cost, and employee value reporting jointly contribute to financial performance.

Theory: The study extends theoretical discourse by applying and refining key theories such as the resource-based view (RBV), Human Capital Theory, and Stakeholder Theory within the context of oil and gas firms. While these theories argue that human resources are valuable, rare, and strategic assets, the study contributes new insights by demonstrating how investment in human resource costs directly enhances firm competitiveness and financial stability.

Empirics: Empirically, this study fills the existing research gap by providing recent evidence on the relationship between HRA practices and financial performance using panel data drawn from major listed and indigenous oil and gas firms in Nigeria. This study contributes new empirical findings by comparing the effect of different categories of human resource costs on multiple financial performance indicators.

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