
HUMAN RESOURCE COST AND PROFITABILITY OF OIL AND GAS COMPANIES IN NIGERIA

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ABSTRACT

This study examined effect of human resource cost (HRC) on profitability of quoted oil and gas firms in Nigeria. The study adopted staff remuneration cost, staff size and staff training and development as proxies of HRC. Profitability on the other hand, was proxied by profit after tax (PAT). The study adopted an ex-post facto research design. Data for the study was obtained from secondary sources only. The population of the study comprised 15 oil and gas companies quoted on the Nigerian Stock Exchange as at 31st December, 2021. Staff remuneration cost was found to have positive significant relationship with PAT of firms. It was also found that staff size has negative effect on PAT of oil and gas companies while staff training and development cost have significant effect on PAT. Based on the findings, the study recommends that oil and gas companies should structure their pay system to be more attractive and competitive; and that oil and gas firm's staff size should be reduced to enhanced efficiency and cost minimization, while training and development programmes should be designed to enhance performance of staff, reduce operational cost and improve efficiency.

Keyword: Human resource cost, profitability, staff remuneration cost, staff training and development cost, staff size

INTRODUCTION

The attainment of corporate objectives by firms depends largely on the quality of their human resources. The human capital of a firm is the available human resources at the disposal of the firm. Evidence in literature indicates that quality of human capital significantly depends on its knowledge, skills, motivation and understanding of the firm's core values, procedures and objectives. The human element has been found to be the most significant and uncontrollable production input in all forms of business organisations (Idaka et al., 2020).

According to Reeta (2015), human resources are considered the most valuable resources of an enterprise. This resource is considered the most valuable because the effectiveness with which every other corporate resources is utilized, depend on the quality of available human capital. Human Resource Accounting (HRA) is the process of identifying and measuring data about human resources and communicating this information to interested parties of the organisation (Kankpang et al., 2020).

Therefore, HRA is an information system that provides firm's with management information regarding changes occurring to its human capital (Reeta, 2015). Managers in today's globalized system spend huge financial resources in the process and functions of recruitment, selection, hiring, retention, training and development of workforce as well as the provision of welfare and safety packages. The main

objective of this, is to achieve improved performance, higher viability and competitiveness for their organisations. In recent times, businesses are coming under increased pressure to pay more attention to reporting issues relating to human resource management and reporting in their financial statements.

The foregoing has resulted in increased openness in communication on human capital issues. This study therefore attempts to establish the effect of human resources cost (HRC) on profitability of quoted oil and gas companies in Nigeria. The study decomposed HRC into staff remuneration cost, staff size and training and development cost, and used profit after tax (PAT) to represent profitability.

The following hypotheses were formulated to guide the study:

Ho₁: Staff remuneration cost does not have a significant effect on profit after tax of quoted oil and gas companies in Nigeria.

Ho₂: Staff size does not have significant effect on profit after tax of quoted oil and gas companies in Nigeria.

Ho₃: Staff training and development cost does not have a significant effect on the profit after tax of quoted oil and gas companies in Nigeria.

LITERATURE REVIEW

Theoretical framework

This study was backed by two theories: human capital theory and resource-based theory. Human capital theory (Becker, 1964; Schultz, 1961) is anchored on labour economics principles which focuses on general work force in quantitative terms. The theory contends that sufficient expenditure in training and education of workers raises the productivity of workers by imparting useful knowledge and skills; and also raising workers' future income through increase in their lifetime earnings. The theory postulates that expenditure on education or training and development is costly, and should be considered as investment since it is undertaken with a view to increasing personal incomes.

Resource based theory is regarded as one of the theories of strategic management that is widely referenced because of its practical relevance to contemporary management practice. The key theme of resource-based view is that the exploration of a firm's resources is basically geared towards gaining sustainable competitive advantage over competitors (Kankpang & Nkiri, 2019). Accordingly, the theory suggests that competitive advantage can only be achieved by effective and efficient employment of resources available to a firm.

Concept of Human Resource Cost

As defined by the American Accounting Association (2003), HRA is the process of identifying, measuring and communicating information about human resources in order to facilitate effective management within an organization. Myers (2006) considers human resources as equivalent to other assets in the organization that require investment over time to make them productive. Such investment relates to hiring, sustaining, training and development, welfare and security costs. It could also be seen as a process of identifying and reporting an organisation's human resource related investments that are not reported in conventional accounting practice.

Identifying and measuring the value of human resource is a process worth investing. HRA valuation has remained an academic exercise and largely ignored even in industries where the expertise of employees is the key differentiating factor. The process of valuation is complex and challenging. But unless we adequately assess the value of human resources, we will not be able to respond to future needs.

Like other resources of the company, employees possess value. Human resource valuation means identifying and measuring value of human resources and communicating the information to the interested parties (Harvey et al., 2011). However, human resource cost is represented in the financial statements by recording the amortized value of employees as expenses (Cascio, 2008) while charging

revenue expenditure to revenue in the statement of comprehensive income (Mirvis & Macy, 2006; Atseye et al., 2020)

Concept of Profitability

The monetary earning a firm achieves after all costs associated with operations have been deducted is known as profit (Ateke & Kalu, 2016); and the ability of a business undertaking to make profit is termed profitability. Profitability is also sometimes described as the extent to which a business is profitable. It is a quantitative index used to assess a firm's ability to generate earning in excess of the combination of all expenses incurred on a given investment (Ateke & Simeon, 2018).

Profitability is a basic goal of businesses because it determines long term survival. It is an important concept in business; and has been a topical concern for managers, shareholders and researchers (Ejoh & Iwara, 2014). Profitability is generally, regarded as a key determinant of business performance (Kankpang et al., 2023), which according to Gavrea et al. (2011), is a set of financial and non-financial indicators which offer information on the degree of achievement of objectives and results.

METHODOLOGY

The study employed descriptive and ex-post facto research design. Data for the study was extracted from published audited annual reports and accounts of companies and Nigerian stock exchange fact book which provide information on stock prices. The population of the study comprised of all the fifteen (15) quoted oil and gas companies on the Nigerian Stock Exchange (NSE) as at 31st December 2021. The sample of the study include 10 quoted oil and gas companies.

The companies selected for the study are those with financial information necessary to extract the measures of HRA for the period 2011-2021; which were still listed on the NSE as at December 2021; and whose market value is available and computed already in financial databases consulted. Having satisfied all the criteria used in filtering, 10 companies: Conoil Plc, Eterna Plc, Forte Oil, Japul Oil, Oando Plc, MRS oil Nigeria Plc, Rak Unity Oil, Seplat Petrol, and Total Nigeria Plc. were included in the sample. Descriptive statistics was used to compute summary statistics for the dependent and independent variables of the study. E-Views 10.0 was employed to run the data analysis. The statistical model adopted for the study was:

$$PAT = \beta_0 + \beta_1 SRC_t + \beta_2 SS_t + \beta_3 TDC_t + \varepsilon_t$$

Where:

PAT = Profit after tax

SRC = Staff remuneration cost

SS = Staff size

TDC = Training and development Cost

β_0 = Constant term

$\beta_1 - \beta_3$ = Unknown parameters to be estimated

ε = Error term,

Apriori Expectation:

It is expected that the $\beta_1 - \beta_3$ will be positive and significant, i.e. $\beta_1, \beta_2, \beta_3 > 0$.

The statistical approaches used include coefficient of determination (R^2), correlation coefficient (R), t-test used to measure significance of the independent variables to the dependent variable and the hypothesis was tested at 5% level of significance and at 95% confidence interval. F-test was used to determine the overall significance of the regression model at 5% of significance. Durbin Watson statistics was used to test for autocorrelation.

DATA PRESENTATION AND ANALYSIS

Table 1: Summary of descriptive statistics

Variables	No OBS	MEAN	STD DEV	MIN	MAX
PAT ₦Mill	70	-7180.48	41411.58	-210000	41000
SFCO ₦Mill	70	3000.21	3368.38	101.85	12000
SFSZ	70	236.51	158.12	52	601
SFDC	70	0.671	0.47	0	1
LEV	70	0.763	0.25	0.467	2.222

Source: Descriptive Statistics Result using STATA 13 Appendix

Table 1 reveals the descriptive statistics for the dependent and independent variables. The mean value of loss after tax is revealed to be -₦7.2 billion and a standard deviation of ₦41.4 billion indicating that profit after tax of listed oil and gas firms in Nigeria is highly dispersed. The average indicates that oil and gas firms experience loss and are not efficient in making profit during the period. This mean value could result from the abnormal losses experienced by Oando Plc during the period of the study. There is a wide spread of firm individual PAT from the mean.

Table 1 also shows that the minimum value and maximum value of PAT is -₦210 billion and ₦41 billion respectively. Similarly, Table 1 shows that staff size has an average value of 237 employees and a standard deviation of 158. This implies that the average number of staff of the firms was 237. The standard deviation shows low dispersion of the sampled firm's individual staff size from the mean. The number of staff is similar in nature across listed oil and gas firms in Nigeria during the period of the study.

Table 1 further shows that the smallest size of staff is 52 and the highest is 601. The descriptive statistic from Table 1 with regard to staff cost development cost measured with a dichotomous variable shows a mean value of .674 and a standard deviation of 0.47. This mean value signifies that on average 67.4% of the sample firms spend money on training and development of their staff. The minimum and the maximum value are 0 and 1 respectively.

Lastly on the control variables, Leverage (LEV) shows an average value of 0.768 and a standard deviation of 0.25 which suggests low disparity of the data from the mean. The average value implies that the sampled firms are highly levered as they have more debt in their financial structure (61.8% of the total assets). In addition, the table reveals a minimum and a maximum value of 0.467 and 2.22 respectively.

Table 7: Robust Random Effect Regression Model

Variable	Coefficients	Std error	t-value	p-value
STFC	2.768	1.34	2.06	0.039*
STSZ	-0.372	1.67	-2.24	0.025*
SDC	0.012	0.005	2.69	0.007*
LEV	-0.001	0.001	-1.64	0.101
CONST	-0.176	0.092	-1.92	0.055
R ² within	0.177			
f-statistic	19.02			
p-value	0.001			

Source: Robust Random effect model Result using STATA 13

***, **, and * denote statistical significance at the 1%, 5%, and 10%

Table 2 presents the result of random effect model selected for the study based on Hausman specification test. The regression result shows that HRC variables (SFCO, SFSIZ and SFDC) and the control variables leverage are able to give account of 17.7% change in PAT of quoted oil and gas companies in Nigeria. The F-statistics reveal a value of 19.02 and a p-value of 0.000 which is significant

at 5% level significance. This reveals that the model is fit and adequate. It also shows that the variables jointly have significant effect on profitability of quoted oil and gas companies in Nigeria.

The first hypothesis tested for effect of staff remuneration cost (SRC) on profit after tax of quoted Oil and Gas companies in Nigeria. The results showed that SRC has a p-value of 0.039 which is significant at 5% level of significance. This suggests that SRC has significant effect on PAT of quoted oil and gas companies in Nigeria.

The second hypothesis tested for effect of staff size on profitability of quoted oil and gas firms in Nigeria. The result revealed that staff size affects profitability of quoted oil and gas companies in Nigeria as revealed by the coefficient of -0.372 and a p-value of 0.025 which is significant at 5% level of significance.

From the third hypothesis, TDC cost was tested for its effect on PAT of quoted oil and gas companies in Nigeria. The result revealed that TDC has a coefficient of .337 with P- value of 0.000 which is statistically significant at 1% level of significance.

DISCUSSION OF FINDINGS

The study reveals that staff cost has positive and significant relationship with profit after tax of quoted Oil and Gas companies in Nigeria. Table 4.7 also reveals that SFCO has a coefficient of 2.76 and p-value of 0.039 which is significant at 5% level of significance. This implies that when firms their salaries, wages and other allowances paid to employees, the firm profit after tax will increase by ₦2.76. This finding aligned with human capital theory which predicts that cost of education, training and development as well other expenditures incurred on employees improve productivity of individual workers and also creates a competitive advantage which ultimately result in improved organizational performance.

The findings also conform to the findings of Onyekwelu and Ironkwe (2021) that personnel cost have significant effect on profitability. The findings contradicts the findings of Olaniyan and Lucas (2008) that staff cost does not play a role in performance; and that of Onyekwelu and Ironkwe (2021) that increment in staff salaries has a statistically significant effect on return on asset.

Our analyses reveals that increase in staff size results in decrease in PAT. This suggests that while understaffing may make sense to management, it has negative long-run impact. This position aligns with the report of Onyekwelu and Ironkwe (2021) that number of staff has a statistically significant negative effect on return on asset.

The result revealed that staff development and training cost has a correlation coefficient of .012 and a p-value of 0.007 which is significant at 5% level of significance. This indicates that increase in staff development and training cost improve PAT of quoted oil and gas firms in Nigeria. The finding implies that when oil and gas firms spend more on staff training and development, their productivity level will increase.

Staff productivity improves when they undergo training, and this reflects in PAT of the sampled firms. This position is line with human capital theory which explained that cost of education, training and development improve productivity of workers and create competitive advantage, which ultimately result in improved organizational performance. This finding is consistent that of Onyekwelu and Ironkwe (2021) that HRA disclosure and training cost significantly affect return on asset and return on equity positively; and that of Olaniyan and Lucas (2008) that training and development have significant positive relationship with EPS.

CONCLUSION AND RECOMMENDATIONS

This study focused on examining HRC and profitability of oil and gas firms in Nigeria. The empirical analyses conducted in the study shows that HRC in terms of staff remuneration cost and staff training and development cost positively affects profitability of oil and gas firms. The study however observed that increase in number of staff negatively affect profitability of oil and gas firms. In lieu of the results of the empirical analyses, the study concludes that HRC in terms of remuneration and staff training and development positively affects profitability of oil and gas firms.

The study recommends that oil and gas firms that seek to improve their profitability should institute remuneration structures that are competitive in order to attract and keep quality staff that will contribute to their productivity. Also, oil and gas firm are also advised to reduce their staff size in order to cut down on wastages in remuneration. This can be achieved through proper structuring. In addition, the study recommends that oil and gas firms should continually train and develop their staff on new ways of doing things in the industry especially on the application of technology to improve efficiency and minimize operational cost.

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