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EFFECT OF HUMAN RESOURCE COST ON PROFITABILITY OF QUOTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT

This study ascertained the effect of Proper Disclosure of Human Resource Cost on Profitability of quoted industrial goods firms in Nigeria from 2008-2022. Specifically, this study aimed to ascertain the effect of staff cost on return on assets, return on capital employed and net profit margin. This study was anchored on knowledge-based theory. Purposive sampling technique was adopted to select nine (9) quoted industrial goods firms from a population of thirteen (13) quoted industrial goods firms in Nigeria. This study utilized secondary data from sample firms financial statement, hence, ex-post facto research design was employed. Pearson coefficient correlation was employed to determine the nature and strength of relationship between the dependent and independent variables of the study, while, simple linear regression analysis was adopted to determine the extent and level of significance at which human disclosure affects profitability with the aid of E-View 10.0 statistical software. The study found that staff cost has a significant positive effect on return on assets, return on capital employed and net profit margin at 5% level of significance respectively. It was recommended inter alia that industrial goods firms in Nigeria should make effort to increase their commitment to staff development such as education and training in order to improve their profitability.

KEYWORDS: Staff Cost, Net Profit Margin, Return on Capital Employed, Return on Assets

BACKGROUND TO THE STUDY

Human resource is one of the major factors of production and had been generally referred to as all human efforts (skilled, semi-skilled and unskilled) used in the process of production. Human Resource is a term which refers to the set of individuals who make up the workforce of an organization or a business entity. It comprises the energies, skills, talents and knowledge of people which are, or which potentially can be applied to the production of goods or rendering useful services. The driving force of an organization is the human force. The success or failure of any organization is directly related to how human resource are able to effectively and efficiently manage and organize other factors of production or resources. Human resource, according to Amahalu, Abiahu, Obi and Okika, 2016), are



the energies, skills, talent and knowledge of people which are, or which potentially can be applied to the production of goods or rendering useful services.

Furthermore, human resource accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties. Human Resource accounting relates to the quantification in monetary terms of human resources employed by an organization. A well-developed system of human resource/capital accounting could contribute significantly to internal decisions by management and external decisions by investors (Amahalu & Moedu, 2023). Firms that are human resource-oriented (Such as firms in accounting, law, consulting and especially firms in educational sectors.) will appreciate this better. It can then be argued that, the real profit of an organization cannot be truly ascertained without the inclusion of the human assets. The problem now is what is the method of accounting treatment of human assets that will be generally accepted? Under human resource accounting, a value is placed on people based on factors like, experience, education, psychological traits, and, most importantly, future earning power (benefit) to the company. The non-accounting of human resources and the change occurring therein, of an organization may provide a poor picture of the profits and profitability of the organization. To ensure growth and development of any organization, the efficiency of people must be augmented in the right perspective (William, Matonti & Nicolo, 2019; Okudo, Amahalu, Obi & Okafor, 2022). Without human resources, the other resources cannot be operationally effective. The real health of the organization is indicated by the human behavior variables, like group loyalty, skill, motivation and capacity for effective interaction, communication and decision making. The success or otherwise of an organization depends on how best the scarce physical resources are utilized by the human resource (Amahalu, Egolum, Ezechukwu & Obi, 2018).

STATEMENT OF THE PROBLEM

The importance of human capital is constantly increasing, many organizations face problems with its management, mostly due to measurement difficulties. The increasing gap observed between market value and book value of many companies has drawn attention towards investigating the value missing from financial statements. Human capital IC is considered to be the hidden value that escapes financial statements and the one that leads organizations to obtain a competitive advantage (Amahalu, Agbionu & Obi, 2017).. Additionally, it is believed that the limitations of financial statements in precisely explaining firm value reveal the fact that, nowadays, the source of economic value is the creation of IC and no longer the production of material goods. The widespread acceptance of human as a source of competitive advantage led to the development of appropriate methods of measurement, since traditional financial tools are not able to capture all of its aspects.

The inconsistency, contradictory and mixed findings of prior researches is evidence of the existence

of a gap in knowledge. For instance, Xu and Wang (2019) found a negative relationship between human resource cost disclosure and profitability. On the other hand, Tom-West, Okoye and Amahalu (2021); Vidyarthi (2019) reported a positive relationship between human resource cost and profitability. Furthermore, Diepiriye (2018) found a positive and non-significant relationship between human resource accounting and profitability. The divergent views of prior literatures ranging from negative relationship to positive relationship and non-significant relationship have created a gap in knowledge which this study tends to fill. In an attempt to filling the gap in knowledge, this study concentrated on industrial goods sector which previous studies are yet to consider (to the best knowledge of the researcher).

OBJECTIVES OF THE STUDY

The broad objective of this research work is to determine the effect of Human Resource Cost on Profitability of quoted industrial goods firms in Nigeria. The specific objectives are to:

- i. Ascertain the effect of Staff Cost on Return on Assets (ROA) of quoted industrial goods firms in Nigeria.
- ii. Evaluate the effect of Staff Cost on Return on Capital Employed (ROCE) of quoted industrial goods firms in Nigeria.
- iii. Determine the effect of Staff Cost on Net Profit Margin (NPM) of quoted industrial goods firms in Nigeria.

RESEARCH HYPOTHESES

The following propositions were hypothesized in a null form:

H₀₁: Staff Cost has no significant effect on Return on Assets (ROA) of quoted industrial goods firms in Nigeria.

H₀₂: Staff Cost has no significant effect on Return on Capital Employed of (ROCE) of quoted industrial goods firms in Nigeria.

H₀₃: Staff Cost has no significant effect on Net Profit Margin (NPM) of quoted industrial goods firms in Nigeria.

CONCEPTUAL REVIEW

Human Resource Cost

Human resource cost is the assigning, budgeting and reporting the cost of human resource incurred in an organization, including wages and salaries and training expenses. The original cost of human resources may be defined as the sacrifice that was actually incurred to acquire and develop or replace people. It includes costs of (Mbonu & Amahalu,2021a):

- recruitment,
- selection,



- hiring,
- placement,
- orientation, and
- on-the-job training.

It has elements of direct costs as well as indirect costs. For example, a trainee's salary is a direct cost, while the time spent by the supervisor or other employees during training contributes to the indirect cost. For managerial uses of the cost data, it is desirable to include the opportunity costs incurred in the original costs of human resources. However, since the reliability of the opportunity costs can always be questioned, it should not form part of reporting to investors and external users. The approaches used for measuring HR are mainly cost approach and the economic value approach. The cost approach may be historical cost and replacement cost basis (Ezeokafor & Amahalu, 2019).

Staff Cost

Staff cost is the assigning, budgeting and reporting the cost of human resource incurred in an organization, including wages and salaries and training expenses. The original cost of human resources may be defined as the sacrifice that was actually incurred to acquire and develop or replace people. It includes costs of recruitment, selection, hiring, placement, orientation, and on-the-job training. It has elements of direct costs as well as indirect costs. For example, a trainee's salary is a direct cost, while the time spent by the supervisor or other employees during training contributes to the indirect cost (Mbonu & Amahalu, 2021b).

Profitability

Profitability is ability of a company to use its resources to generate revenues in excess of its expenses. In other words, this is a company's capability of generating profits from its operations.. Profitability is the metric used to determine the scope of a company's profit in relation to the size of the business. Profitability is a measurement of efficiency and ultimately its success or failure. Profitability is a business's ability to produce a return on an investment based on its resources in comparison with an alternative investment (Amahalu & Obi, 2020b). Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is ability of a company to use its resources to generate revenues in excess of its expenses. In other words, this is a company's capability of generating profits from its operations.

Return on Assets

Return on assets (ROA) is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. Return on assets (ROA) is an indicator of how profitable a company



is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage. Return on assets is a profitability ratio that provides how much profit a company is able to generate from its assets. Return on assets (ROA) measures how efficient a company's management is in generating earnings from their economic resources or assets on their statement of financial position. ROA is shown as a percentage, and the higher the number, the more efficient a company's management is at managing its statement of financial position to generate profits (Amahalu & Obi, 2020a).

$$\text{ROA} = \text{Net income} / \text{Total Assets}$$

Return on Capital Employed

Return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed. ROCE is calculated as:

$$\text{ROCE} = \text{Earnings Before Interest and Tax (EBIT)} / \text{Capital Employed}$$

“Capital Employed” as shown in the denominator is the sum of shareholders' equity and debt liabilities; it can be simplified as (Total Assets – Current Liabilities). Instead of using capital employed at an arbitrary point in time, analysts and investors often calculate ROCE based on “Average Capital Employed,” which takes the average of opening and closing capital employed for the time period (Charles, 2017). A higher ROCE indicates more efficient use of capital (Okudo, Amahalu & Oshiole, 2023). ROCE should be higher than the company's capital cost; otherwise, it indicates that the company is not employing its capital effectively and is not generating shareholder value.

Net Profit Margin

Net profit margin is the ratio of net profits to revenues for a company or business segment. Typically expressed as a percentage, net profit margins show how much of each dollar collected by a company as revenue translates into profit (Amahalu, Nweze & Obi, 2017).

The equation to calculate net profit margin is: net profit / revenue.

To calculate net profit margin, find the company's revenue, which consists of all the sales, fees or other money the business has collected through the period. To ascertain profits, subtract all operating expenses and corporate taxes from revenue. If the business pays stock dividends, also subtract those payments from revenue when calculating profit, but do not take common stock dividends into account. Then, simply divide net profit by revenue, and to convert that number into a percent, multiply it by 100

Human Resource Cost and Return on Assets



All companies need strong and competitive human resource to succeed, the success of firms whether large, small/medium depends on the quality of human resource they have. According to Okegbe, Eneh and Amahalu (2019), the characteristic that differentiate successful organizations from their contemporaries in almost all the sectors is the quality of the people they are able to get and retain. Therefore, money spent on employees' training and development is one of the best investments that companies could make (Okoye, Okoye and Amahalu, 2015). In accounting, expenses on human resource are not capitalized but are expensed as they occur. They are identified as recruitment cost, training cost, staff welfare, pension, and so on. Many authors have argued that human resource should be treated as a capital expenditure, but just like every tangible asset, human beings cannot be kept at a place without the tendency to move from organization to organization. Also, since the life span cannot be determined, the depreciation rate is difficult to ascertain.

Human Resource Cost and Return on Capital Employed

There have been controversial issues of human capital reporting on whether it is value relevant to be considered as asset, even though its association with company's expected future benefits is not certain. Some group considered it as what people owned from learning, experience and skill while another group delineated it as human capability that is directly linked to the work (Amahalu, Ezechukwu, & Okudo, 2022). The chartered institute of management accountants noted that all drivers of performance and value should be provided to investors including the non-financial ones such as intangibles (Suresh & Mallesu, 2013; Amahalu & Osonwa, 2023). The financial Accounting Standard Board addressed this issue by encouraging business to voluntarily disclose information regarding their intangibles and intellectual capital (FASB 2001). Cheah and Ting (2019) examined the relationship between corporate characteristics and human resource accounting disclosure and concluded that companies with higher profitability intended to disclose more human resource accounting information.

Human Resource Cost and Net Profit Margin

The resources of a business otherwise called the 4-ms including men. Men in this context refer to human asset employed in the production of goods and services. The success or failure of every enterprise is based on the effective utilization of the entity's resources. Human Resources (HR) are the energies, skills, talents and knowledge of people which are or which potentially can be applied to the production of goods or rendering useful service. They further see human resources accounting as the process of identifying and measuring data about human resources and communicating this information to the interested parties (Abiahu, Egbunike, Udeh, Egbunike & Amahalu, 2019). Tom-West, Okoye & Amahalu (2021) revealed that human resource accounting had a positive and insignificant impact on net profit margin.



THEORETICAL FRAMEWORK

Knowledge-Based Theory

The knowledge-based theory of the firm considers knowledge as the most strategically significant resource of a firm. Its proponents argue that because knowledge-based resources are usually difficult to imitate and socially complex, heterogeneous knowledge bases and capabilities among firms are the major determinants of sustained competitive advantage and superior corporate performance. This knowledge is embedded and carried through multiple entities including organizational culture and identity, policies, routines, documents, systems, and employees. The knowledge based view (KBV) of the firm is an extension of the RBV of the firm because it considers that organizations are heterogeneous entities loaded with knowledge. The resource base of the organization increasingly consists of knowledge-based assets (Ndulue, Okoye & Amahalu, 2021). Knowledge resources are particularly important to ensure that competitive advantages are sustainable, as these resources are difficult to imitate, they are the foundation for sustainable differentiation.

Empirical Review

Mohammad, Chandran, Kweh and Wen-Min (2019) used a dynamic network data envelopment analysis model to estimate the intellectual capital efficiency at three levels in the insurance industry in Malaysia over the period of 2005–2012. Within the insurance industry, deficiencies occurred in the human and structural capital stages as opposed to the physical capital stage. A further investigation indicated that total investment is the major concern for the deficiencies. Moreover, the cluster analysis highlighted the strengths and weaknesses of the insurers based on their inherently similar efficiencies. Malaysian insurance industry need to translate and promote the existing knowledge-based economy agenda lauded by the government to improve the intellectual capital efficiency, particularly at the human capital level.

Hasan-Subhi (2019) investigated whether intellectual capital plays a significant role in financial performance of banking sector in Iraq from 2009-2017. The study used value-added intellectual coefficient approach to measure the intellectual capital by aggregating the capital-employed efficiency, Human capital efficiency and structural capital efficiency. For financial performance, the study used two proxies, return on assets and return on equity. The study regressed return on assets and return on equity on value-added intellectual coefficient approach separately and then regressed financial performance with each component of intellectual capital. Overall findings explained significant role of intellectual capital on the financial performance of banking sector in Iraq. Furthermore, intellectual capital components like capital-employed efficiency, Human capital efficiency and structural capital efficiency have a positive and significant relation with return on assets and return on equity, except structural capital efficiency which has no significant effect on return on



equity.

Efeeloo, Ajoku, Chikwuchehia and Turakpe (2020) investigated the relationship between staff costs and profitability of quoted oil and gas companies in Nigeria. It specifically examined the effects of staff salaries, medical expenses and training costs on the profit margin of listed oil and gas firms. The study was anchored on the Expectancy Theory. Data were collected from annual financial reports of the firms for the period, 2013-2018. Judgmental sampling technique was used to select a total of five (5) companies for the study and analyzed using descriptive, correlation and regression analysis tools. The results of the test of hypotheses indicated that both salaries and training costs impact positively on profit margin whereas medical expenses had negative effect on profitability; but only training cost was significant. It was recommended that the management of oil and gas firms in Nigeria should pay greater attention to staff training and development while ensuring that health hazards within the workplace are minimized as much as possible.

Ndum and Oranefo (2021) examined effect of human resource cost on financial performance of quoted brewery firms in Nigeria. The study adopted Ex-Post-Facto research design. The population of the study is made up of 5 breweries companies quoted on the floor of the Nigerian Stock Exchange (NSE) as at 2019 and have consistently submitted their annual reports to the NSE from 2007 to 2019. The data for this study were extracted from the published annual reports and accounts of these companies. The analysis revealed that staff cost has positive and significant effect on the net profit margin of quoted brewery firms in Nigeria, while staff cost has positive and insignificant effect on the return on assets of quoted brewery firms in Nigeria. The study thereby recommended that Nigeria breweries should imbibe to the culture of capitalizing and reporting investment on human resource that can improve the quality and productivity. This will impact positively on their financial performance consequently on the share price value.

METHODOLOGY

Research Design

This study adopted the *Ex-post Facto* research design.

Population of the Study

The population of the study was made up of the thirteen (13) industrial goods firm quoted on the floor of the Nigerian Stock Exchange as 31st December, 2022. They include Austin Laz & Company Plc, Berger Paints Plc, Beta Glass Plc, BUA Cement Plc, CAP Plc, Cutix Plc, Dangote Cement Plc, Greif Nigeria Plc, Lafarge Africa Plc, Meyer Plc, Notore Chemical Industries Plc, Portland Paints & Products Nigeria Plc and Premier Paints Plc.



Sample Size and Sampling Method

Purposive sampling method was adopted in selecting nine (9) companies based on the availability of data for thirteen (13) years covering from 2008-2022. The selected nine (9) industrial goods companies thereby served as the sample size of this study, which are: Berger Paints Plc, Beta Glass Plc, CAP Plc, Cutix Plc, Dangote Cement Plc, Greif Nigeria Plc, Lafarge Africa Plc, Meyer Plc and Portland Paints & Products Nigeria Plc.

Sources of Data

The study made use of secondary source of data. This involves the collection of already existing data. This was gathered through literatures, comprising of journals, periodicals, magazines, textbooks, Nigerian Stock Exchange Fact book, and Annual reports and Accounts of sample companies.

Description of Variables

Independent Variable

The independent variable of this study is Human Resource Cost which was proxied with Staff Cost (SC):

- i. **Staff cost (SC):** This includes the salaries and wages of the employees. Staff cost is contained in the annual financial reports of the selected industrial goods companies.

Dependent Variable

The dependent variable of this study is Profitability which has, ROA, ROCE and NPM as its measures:

- i. **Return on asset (ROA)**

ROA simply indicates how profitable a company is in relation to its total assets.

ROA is denoted by; $\text{Net Income} / \text{Total assets}$

- ii. **Return on Capital Employed (ROCE)**

Return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed.

ROCE is calculated as: $\text{Earnings Before Interest and Tax (EBIT)} / \text{Capital Employed}$

Capital Employed can be simplified as $(\text{Total Assets} - \text{Current Liabilities})$.

- iii. **Net Profit Margin (NPM)**

Net profit margin is the ratio of net profits to revenues for a company or business segment. Typically expressed as a percentage, net profit margins show how much of each dollar collected by a company as revenue translates into profit.

Net profit margin is: $\text{net profit} / \text{revenue}$.

Model Specification

The following models were formulated in line with the hypotheses of this study:

$$ROA_{it} = \beta_0 + \beta_1 SC_{it} + \mu_{it} \quad - \quad - \quad - \quad \mathbf{H01}$$

$$ROCE_{it} = \beta_0 + \beta_1 SC_{it} + \mu_{it} \quad - \quad - \quad - \quad \mathbf{H02}$$

$$NPM_{it} = \beta_0 + \beta_1 SC_{it} + \mu_{it} \quad - \quad - \quad - \quad \mathbf{H03}$$

Where:

- β_0 = Constant term (intercept)
- β_{it} = Coefficients to be estimated for firm *i* in period *t*
- μ_{it} = Error term/Stochastic term
- SC_{it} = Staff Cost for firm *i* in period *t*
- ROA_{it} = Return on Assets for firm *i* in period *t*
- $ROCE_{it}$ = Return on Capital Employed for firm *i* in period *t*
- NPM_{it} = Net Profit Margin for firm *i* in period *t*

Data Presentation and Analysis

Table 1: Pearson Correlation Matrix

	ROA	ROCE	NPM	SC
ROA	1.000000			
ROCE	0.767986	1.000000		
NPM	0.271048	0.587764	1.000000	
SC	0.427288	0.274822	0.180619	1.000000

Source: E-Views 10.0 correlation output, 2023

Interpretation on Pearson Correlation Matrix

The result of the Pearson correlation Matrix in table 1 indicates that there is a positive relationship between ROA, ROCE, NPM and SC at a coefficient factor of 0.427288, 0.274822 and 0.180619 respectively.

Test of Research Hypotheses

Test of Hypothesis I

H01: Staff Cost has no significant effect on Return on Assets (ROA) of quoted industrial goods firms in Nigeria.

Table 2 Simple Linear Regression analysis testing the effect of Staff Cost on ROA

Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 05/30/23 Time: 15:03
 Sample: 2008 2022
 Periods included: 15
 Cross-sections included: 9
 Total panel (balanced) observations: 135

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.419106	0.050990	8.219399	0.0000
SC	0.115984	0.049199	2.357464	0.0202
R-squared	0.226145	Mean dependent var		0.962051
Adjusted R-squared	0.202497	S.D. dependent var		0.598307
S.E. of regression	0.599054	Akaike info criterion		1.830015
Sum squared resid	41.26952	Schwarz criterion		1.877232
Log likelihood	-105.0559	Hannan-Quinn criter.		1.849185
F-statistic	5.557635	Durbin-Watson stat		1.891553
Prob(F-statistic)	0.020201			

Source: E-Views 10.0 Regression Output, 2023

Interpretation of Regression Result

Table 2 has shown the meaningful role of staff cost in determining the strength of ROA. The results are satisfactory in terms of standard analytic tests. The coefficient factor ($\beta_1= 0.115984$) indicates that staff cost relates positively with ROA, with a t-statistic of 2.357464 and Probability value of 0.0202. This implies that staff cost has a significant positive relationship with ROA. The value of R-squared is showing that 22.6% of the total variation in dependent variable (ROA) is explained by the independent variable (SC) to the determination of ROA while the remaining 77.4% was caused by other explanatory factors outside this model and this is captured by the error term. The overall performance of the model is satisfactory as shown by Prob(F-statistic) = 0.020201.

Since there is strong evidence that ROA is influenced by staff cost at 5% level of significance; as indicated by the P-value of 0.0202 which is less than the critical value of 0.05 (5%). Thus, this research upholds that staff cost has a significant positive effect on ROA of quoted industrial goods firms in Nigeria for the period of 2008 to 2022.

Test of Hypothesis II

H₀₂: Staff Cost has no significant effect on Return on Capital Employed of (ROCE) of quoted industrial goods firms in Nigeria.

Table 3 Simple Linear Regression analysis testing the effect of Staff Cost on ROCE

Dependent Variable: ROCE
Method: Panel Least Squares
Date: 05/30/23 Time: 15:04
Sample: 2008 2022
Periods included: 15
Cross-sections included: 9
Total panel (balanced) observations: 135

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.728255	0.096062	7.581112	0.0000
SC	1.261125	0.406665	3.101135	0.0025
R-squared	0.241128	Mean dependent var		0.983333
Adjusted R-squared	0.227558	S.D. dependent var		0.813524
S.E. of regression	0.816592	Akaike info criterion		2.449592
Sum squared resid	76.68460	Schwarz criterion		2.496809
Log likelihood	-141.3011	Hannan-Quinn criter.		2.468761
F-statistic	9.617041	Durbin-Watson stat		1.691369
Prob(F-statistic)	0.002460			

Source: E-Views 10.0 Regression Output, 2023

Interpretation of Regression Result

The regressed coefficient result in table 3 indicates a positive relationship between staff cost ($\beta_1= 1.261125$) and ROCE. The probability of the slope coefficients indicates that; $P (x_1= 0.0025 < 0.05)$. This is an indication of a significant positive relationship between staff cost and ROCE. The value of R-squared is showing that 24.1% of the total variation in dependent variable (ROCE) is explained by independent variable (staff cost) to the determination of ROCE while the remaining 75.9% was caused by other explanatory factors outside this model and this is captured by the error term. The overall performance of the model is satisfactory as shown by $Prob(F\text{-statistic}) = 0.002460$.

Since there is strong evidence that ROCE is influenced by staff cost at 5% level of significance; as shown by the Probability value of 0.002460 which is less than the critical P-value of 0.05 (5%). Hence, this research submits that staff cost has a significant positive effect on ROCE of quoted industrial goods firms in Nigeria for the period of 2008 to 2022.

Test of Hypothesis III

H₀₃: Staff Cost has no significant effect on Net Profit Margin (NPM) of quoted industrial goods firms in Nigeria.

Table 4 Simple Linear Regression analysis testing the effect of Staff Cost on NPM

Dependent Variable: NPM
Method: Panel Least Squares
Date: 05/30/23 Time: 15:05
Sample: 2008 2022
Periods included: 15
Cross-sections included: 9
Total panel (balanced) observations: 135

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.403113	0.029202	13.80443	0.0000
SC	0.395236	0.123622	3.197146	0.0018

R-squared	0.244678	Mean dependent var	0.152991
Adjusted R-squared	0.203977	S.D. dependent var	0.172383
S.E. of regression	0.172726	Akaike info criterion	-0.657278
Sum squared resid	3.430928	Schwarz criterion	-0.610061
Log likelihood	40.45076	Hannan-Quinn criter.	-0.638109
F-statistic	10.22174	Durbin-Watson stat	1.631589
Prob(F-statistic)	0.001821		

Source: E-Views 10, Regression Output, 2023

Interpretation of Regression Result

From the findings in the table 4, the value of R squared is 0.244678, an indication that there was variation of 24.5% on NPM due to changes in staff cost. This shows that only 24.5% changes in net profit margin of industrial goods could be accounted for by staff cost. The probability of the slope coefficients indicates that; $P(x_1 = 0.0018 < 0.05)$. The co-efficient value of 0.395236 for SC implies that NPM is positively related to SC, however statistically significant at 5%. The F-statistical probability is equal to 0.001821, so the null hypothesis was rejected and the alternative hypothesis was accepted. As a result, there is linear relationship of NPM to the independent variable (Staff Cost).

Since the result of the Prob(F-statistic) of 0.001821 is less than the critical value of 5% significance level, leading to the conclusion that staff cost has a significant positive effect on NPM at 5% significant level, hence, H_1 is accepted.



FINDINGS, CONCLUSION AND RECOMMENDATIONS

FINDINGS

Based on the analysis of this study, the following findings were deduced:

- i. Staff cost has a significant positive effect on ROA of quoted industrial goods firms in Nigeria at 5% level of significance.
- ii. Staff cost has a significant positive effect on ROCE of quoted industrial goods firms in Nigeria at 5% level of significance.
- iii. Staff cost has a significant positive effect on NPM of quoted industrial goods firms in Nigeria at 5% significant level.

CONCLUSION

This study explored the relationship between human resource accounting (proxied by staff cost) and profitability (measured by return on assets, return on capital employed and net profit margin) of quoted industrial goods companies in Nigeria. Data were obtained for a thirteen (13) year period covering 2008 to 2022, using a purposive sample of nine (9) quoted industrial goods firms in Nigeria. The results of the tested hypotheses revealed that; staff cost has a significant positive effect on ROA, ROCE and NPM of quoted industrial goods firms in Nigeria at 5% level of significance.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

- i. Based on the positive relationship between staff cost and ROA, industrial goods firms should spend reasonable amounts on the education and training of staff as this will in turn lead to increase in their return on assets.
- ii. Since human resource accounting positively affects return on capital employed, regulatory authorities should incorporate accounting standards for the valuation and disclosure of human resource accounting both manufacturing sector and other sectors in order to boost the firm's value and economies of scale.
- iii. Sequel to the empirical evidence of the significant relationship between staff cost and net profit margin, firms should endeavour to attach information about the value of human resource and the result of their performance during their accounting year in notes and schedule for improved profitability.



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