

MODERATING EFFECT OF FIRM SIZE ON HUMAN CAPITAL COSTS AND FINANCIAL PERFORMANCE OF LISTED AGRICULTURAL COMPANIES IN NIGERIA

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Abstract

This study determined the effect of human capital costs on financial performance of listed agricultural companies in Nigeria. The study employed an ex-post facto research design. The study population was five (5) listed agricultural companies on the Nigerian Exchange Group (NGX). A sample size of five (5) agricultural companies was used, using a census sampling technique covering ten years (2014 to 2023). The data used in this study were secondary, sourced from annual reports and statement of accounts of the five selected firms between 2014 and 2023. The method of data analysis was descriptive statistic, unit root test, diagnostics test and panel least square (PLS) with the help of E-view v12 while moderated multiple regression (MMR) analysis was employed for the purpose of moderating effect with the help of SPSS. The findings showed that staff training costs has positive and insignificant effect on earnings per share, health and safety costs has positive and insignificant effect on earnings per share, staff salaries and wages costs has negative and significant effect on earnings per share, staff gratuity costs has positive and insignificant effect on earnings per share of listed agricultural companies in Nigeria. Furthermore, firm size has positive and significant interacting effect on the relationship between human capital costs and return on assets of listed agricultural companies in Nigeria. The study generally concluded that the effect of human capital costs on financial performance of listed agricultural companies in Nigeria is statistically insignificant for the period spanning from 2014 – 2023. It was suggested amongst others that agricultural companies in Nigeria should reduce the amount spend on staff training because it caused decrease in their returns in terms of earnings per share and overall performance of the firms.

Keyword: Moderating Effect of Firm Size, Human Capital Costs and Staff Gratuity Costs

Introduction

Agricultural companies undoubtedly face a number of difficulties, just like any other business or institution in existence. How to maintain excellent financial performance, what constitutes good financial performance, and how to quantify it are just a few of the many issues that agricultural companies must deal with. Different financial performance indicators exist, some of which are quantitative or numerical and others qualitative. While some of these factors have a significant influence on firm's financial health, others scarcely make a difference (Alao et al., 2023). It is challenging to decide which indicators are most suited to depict the status and current position of firms due to the large diversity. Hence, the correlation between human resource cost and firm financial performance becomes overly important and a matter of interest to the firms (Nyeche et al., 2025; Adegbayibi et al., 2024; Kankpang et al., 2024; Major & Dumle, 2023; Olayinka et al., 2023; Okeke, 2023; Ogundajo et al., 2023; Alao et al., 2023; Jena et al., 2022; Ndum & Oranefo, 2021; Abdullahi & Bello, 2021). Abraham et al. (2020) stated that human resource is one of the most important factors of production and had been normally specified as all human efforts both skilled, semi skilled and unskilled used in the act of production. Human resource therefore, consists of skills, energies, talents and knowledge of people which are capable of being used in the production of goods or to produce useful services to an organization. Newstyle and Major (2022a) stated that human resource accounting can be linked to the quantification in monetary terms of human capital

or workforce employed by an organization. Newstyle and Major (2022b) opined that, knowledge of employees should be classified cost as human capital in accounting for the purpose of monetary value contributed by employees in the organization. Chukwu et al. (2025) stated that human capital is needed by companies to achieve goal, objectives, increase turnover and others financial performance indicators. Abraham et al. (2022) opined that the main aim of human resource accounting is to support and aid the management to get information on the cost and value of human resource. Human resource accounting discloses the volume of human resources and specifies the right control of maintenance, consumption and valuing of it in the right judgment. It provides information to the interested party about the cost of human capital or human resources in equation to the value obtained out of its utilization. Furthermore, traditional economics defined human resource as the translating and harmonizing effort which propels other resources towards the accomplishment of the organizational goals (Salsabila, 2025; Obulor & Ohaka, 2020).

Several studies have been conducted on the human resource cost or human resource accounting and financial performance. For instance, Nyeche et al. (2025) examined the effects of human capital investment on industrial sector output in Nigeria from 1990 to 2022. The findings of this study indicated that investment in education has a positive and significant effect on industrial sector output in Nigeria in both short run and long run, investment in research and development has a positive and significant effect on industrial sector output in Nigeria in the long run while investment in health has a positive and non-significant effect on industrial sector output in Nigeria in both short run and long run. Jack (2025) investigated the impact of human capital cost on the financial performance of listed commercial banks in Nigeria from 2009 to 2023. Findings reveal significant variability in training costs and financial performance (ROA) among Nigerian commercial banks. Health safety costs demonstrate a positive and statistically significant relationship with ROA. Kankpang et al. (2024) examined effect of human resource cost (HRC) on profitability of quoted oil and gas firms in Nigeria. The study result indicated that 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.

Despite the philosophy in the conventional economics literature about the importance of human resources costs in the equation of value creation, human resources cost largely been relegated to the bottom in the entire valuation of business model elements. Hence, the nexus of human resources cost and financial performance of business entities in Nigeria is still empirically unclear. Therefore, this study sought to ascertain the effect of human capital costs and financial performance of listed agricultural companies in Nigeria. To the best of my knowledge, none of the prior studies have conducted an empirical study on the effect of human resource costs and financial performance of listed agricultural companies in Nigeria. Also, to the best of my knowledge, none of the prior studies has employed moderated multiple regression analysis in moderating the effect of human resource costs and financial performance of listed agricultural companies in Nigeria. , while the specific objectives are to:

1. evaluate the effect of staff training costs on earnings per share of listed agricultural companies in Nigeria,
2. examine the effect of health and safety costs on earnings per share of listed agricultural companies in Nigeria,
3. determine the effect of salaries and wages costs on earnings per share of listed agricultural companies in Nigeria,
4. evaluate the effect of staff gratuity costs on earnings per share of listed agricultural companies in Nigeria,
5. determine the interaction effect of firm size on the relationship between human capital costs and earnings per share of listed agricultural companies in Nigeria.

Review of Related Literature

Conceptual Framework

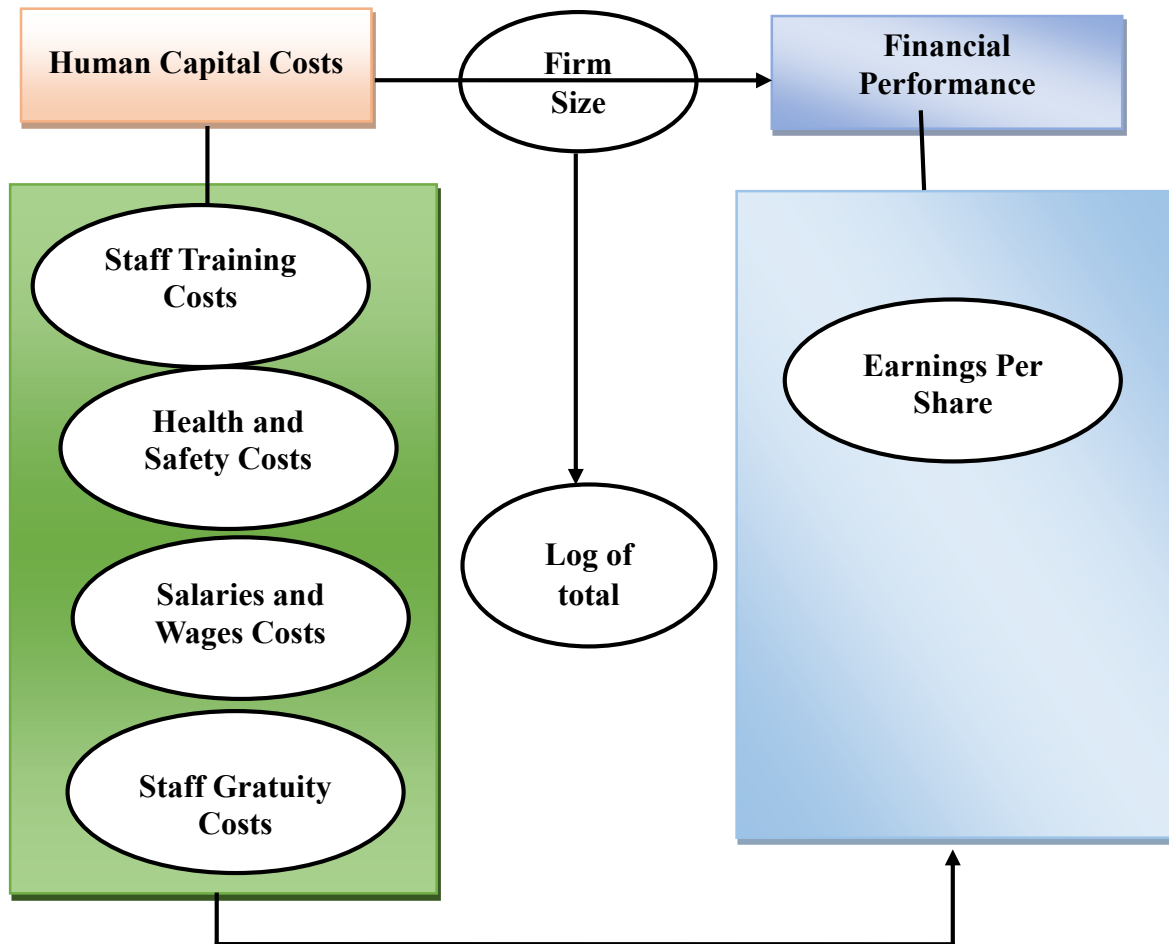


Figure 1: Conceptual framework showing the dimensions of human capital costs and measures of financial performance

Sources: Nyeche et al. (2025), Jack (2025), Major and Dumle (2023), Newstyle and Major (2022a), Newstyle and Major (2022b), Abolo (2022), Chukwu (2018) and Onyinyechi and Ihendinihu (2017).

Conceptual Review

The effect of human capital costs on financial performance

The links between human capital costs and financial performance has indicated a positive, negative, significant and insignificant relationship from prior studies. The prior studies that concluded positive results by Nkechi and Nath (2022) revealed a significant positive effect of human capital on returns on assets. Rufus et al (2022) indicated that intellectual capital impacts positively on organizational performance, but firm size do not play a significant role. Irmansyah and Andesto (2022) showed that Human Capital has a significant influence on Financial Performance (ROA). Hamzah et al. (2022) study found a significant relationship between ERM and organizational performance, and the relationship is moderated by human capital. Oginni et al. (2020) revealed that HRA contributes positive changes in PAT and it is statistically significant. Other variables however showed positive relative contribution but were found to be statistically insignificant. Obulor and Ohaka (2020) found that human resource cost has significant positive effect on financial performance of quoted manufacturing firms in Nigeria. Huda et al. (2020) indicated a positive relationship between human resource investment and the bank's financial performance. Obikwelu (2018) revealed that human

capital development has a positive relationship with manufacturing output, though statistically significant. Oko (2018) confirmed that there is a significant relationship between human asset accounting and corporate profitability and there is positive significant relationship between human asset accounting measurement and corporate financial position. Others include Abosede et al. (2018), Ofurum and Adeola (2018), Olayinka and Olayiwola (2017), Ikpefan et al. (2017).

Prior studies that confirmed negative results include; Newstyle and Major (2022) which result showed that earning per shares under Pre - Covid19 era and Post Covid19 era had in significant relationship with employee cost, training/development cost and valued added intellectual coefficient of listed oil and gas companies in Nigeria. The study concluded that there is insignificant relationship between human capital accounting and financial performance of listed oil and gas companies in Nigeria under Pre - Covid19 era and Post - Covid19 era. Festus and Albert (2020) result showed that human capital does not have significant positive impact on performance of the banks. Akinlade and Adegbe (2020) found that Human Resource Accounting does not have significant effect on financial reporting quality in oil and gas companies in Nigeria. Mishra and Mishra (2017) revealed that the level of human capital disclosures did not show any significant link with firm value.

The effect staff training cost on financial performance

The links between training cost and financial performance has indicated a positive, negative, significant and insignificant effect from prior studies. Studies that indicated positive and significant include; Jack (2025) investigated the impact of human capital cost on the financial performance of listed commercial banks in Nigeria from 2009 to 2023. Findings reveal significant variability in training costs and financial performance among Nigerian commercial banks. Nyeche et al. (2025) examined the effects of human capital investment on industrial sector output in Nigeria from 1990 to 2022. The findings of this study indicated that investment in education has a positive and significant effect on industrial sector output in Nigeria in both short run and long run. Chukwu et al. (2025) investigated the relationship between human capital investments and financial performance of selected listed insurance companies in Nigeria. The results of the study revealed that investments in staff training and retraining have positive and significant relationship with returns on equity of the selected insurance firms. Adu and Olomola (2024) examined the effect of human resource accounting) and on the financial performance of Deposit Money Banks (DMBs) in Nigeria. It was found out that training had significant positive influence on return on capital employed. Aaron and Jonah (2024) determined the relationship between human capital accounting and financial performance of listed pharmaceutical companies in Nigeria for the period of 2013 to 2022. The result showed that staff remuneration cost and staff training and development cost had a positive significant relationship on net profit after tax. Newstyle and Major (2022) result of the study showed that training and development cost has significant relationship with return on capital employed. Ogundajo et al. (2022) study revealed that the disclosure of employee training and development significantly impact on form value. Khadijat et al. (2022) result show that the cost of staff training have a positive significant impact on the profitability of the Nigerian conglomerate companies. Onyekwelu and Ironkwe (2021) result showed that human resource accounting disclosure and training cost significantly affect Return on Asset and Return on Equity positively. Godwin and Udeh (2021) study showed that Staff Training and Development cost has a significant positive effect on EBTIDA. However, the following prior studies indicated negative and insignificant and they include; Newstyle and Major (2022) study result showed that earning per shares under Pre - Covid19 era and Post Covid19 era had insignificant relationship with training/development cost of listed oil and gas companies in Nigeria. Albertini and Berger-Remy (2019) result revealed that human capital (HC), structural capital (SC), and relational capital (RC) did not uniformly influence corporate financial performance. Worlu and Onyinyechi (2016) result obtained showed a no effect on PAT and no effect on training. Festus and Albert (2020) investigated result show that human capital does not have significant positive impact on performance of the banks.

Due to the above mix results about the effect staff training cost on financial performance, the researcher formulated the below hypothesis

H₀₁: Staff training costs has no significant effect on earnings per share of listed agricultural companies in Nigeria,

The effect of health and safety costs on financial performance

The effect of health and safety costs has been employed by few prior studies as compensation cost of human capital accounting against financial performance measures and such result include the following; Jack (2025) investigated the impact of human capital cost on the financial performance of listed commercial banks in Nigeria from 2009 to 2023. Findings revealed that Health safety costs demonstrate a positive and statistically significant relationship with financial performance. Chukwu et al. (2025) investigated the relationship between human capital investments and financial performance of selected listed insurance companies in Nigeria. The results of the study revealed that staff health investment showed positive and significant relationship with returns on equity. Adu and Olomola (2024) examined the effect of human resource accounting) and on the financial performance of Deposit Money Banks (DMBs) in Nigeria. It was found out that health and safety had significant positive influence on capital employed of deposit money banks in Nigeria. Nwauzor and Longjohn (2020) result showed that, the relationship between compensation cost and market share is positive and statistically significant. Giami and Iwo (2021) finding showed a significant positive correlation and statistically significant positive relationship between the cost of staff welfare and both growth in sales volume and return on assets respectively. Odhigu (2016) study revealed that welfare cost has a significant impact on human capital in Nigeria. However, the following prior studies indicated negative and insignificant and they include; Abraham et al. (2022) study revealed that cost of health care and safety have no significant effects on market value using TQ while cost of staff training has a significant effect on market value of a listed deposit money bank using TQ. Newstyle and Major (2022) result of the study showed that health and safety cost has insignificant relationship with return on capital employed of listed healthcare firms in Nigeria. Festus and Albert (2020) investigated result show that human capital does not have significant positive impact on performance of the banks. Ofurum and Adeola (2018) result revealed that there is no significant relationship between human resource accounting and the profitability of quoted firm.

Due to the above mix results about the effect health and safety costs on financial performance, the researcher formulated the below hypothesis

H₀₂: Health and safety costs has no significant effect on earnings per share of listed agricultural companies in Nigeria,

The effect of Salaries and Wages Costs and Financial Performance

The links between staff salaries and financial performance has indicated a positive, negative, significant and insignificant effect from prior studies. Studies that indicated positive and significant include; Chukwu et al. (2025) investigated the relationship between human capital investments and financial performance of selected listed insurance companies in Nigeria. The results of the study revealed that staff welfare investment has positive and significant relationship with returns on equity. Taibat et al. (2024) assessed the impact of human capital expenditure on the financial performance of listed insurance companies in Nigeria. The findings of the study revealed that employees' salaries and wages have significant positive impact on the financial performance of Insurance companies in Nigeria. Adu and Olomola (2024) examined the effect of human resource accounting) and on the financial performance of Deposit Money Banks (DMBs) in Nigeria. It was found out that salaries and wages had significant positive influence on capital employed of deposit money banks in Nigeria. Khadijat et al. (2022) result show that changes in employees' salaries and post-employment benefits

have a positive significant impact on the profitability of the Nigerian conglomerate companies. Okoro et al. (2022) study revealed a positive and significant relationship between staff cost and return on assets; and a positive and insignificant relationship between staff cost and return on capital employed of listed pharmaceutical companies in Nigeria. Abolo (2022) findings of the study were; that recruitment and hiring costs significantly influence return on assets of listed commercial banks in Nigeria. Also, that compensation cost significantly influence return on assets of listed commercial banks in Nigeria. Oswald et al. (2021) findings from the study for both microfinance banks reveal that personnel cost have significant effect on both net profit margin and return on equity. Onyekwelu and Ironkwe (2021) result showed that number of staff and increment in staff salaries has a statistically significant negative effect on Return on Asset. Ikotun and Obi (2020) result indicated that workers' wages and salaries have a positive and noteworthy impact on the benefit making capacity of chose banks. Chukwu (2018) study revealed that staff salary and staff training have positive effect on bank profitability while staff development revealed inverse effect. Asika et al. (2017) findings revealed that increase in salary and retirement benefits have positive effects in organizational profitability.

However, the following prior studies indicated negative and insignificant and they include; Abraham et al. (2022) study revealed that; staff remuneration have no significant effects on market value using TQ while cost of staff training has a significant effect on market value of a listed deposit money bank using TQ. Okoro et al. (2022) study revealed an insignificant relationship between staff cost and return on capital employed of listed pharmaceutical companies in Nigeria. Newstyle and Major (2022) study result showed that earning per shares under Pre - Covid19 era and Post Covid19 era had insignificant relationship with employee cost of listed oil and gas companies in Nigeria. Godwin and Udeh (2021) showed that increment in number of staff has no significant positive effect on EBTIDA. Ngozi and Patricia (2021) study revealed that staff cost has an insignificant effect on the return on assets of quoted brewery firms in Nigeria. Olaoeye and Afolalu (2020) results of the random effect revealed that salaries and wages have insignificant positive relationship except director's remuneration (RENMR) that has insignificant negative relationship with EPS.

Due to the above mix results about the effect salaries and wages costs on financial performance, the researcher formulated the below hypothesis

H₀₃: Salaries and wages costs has no significant effect on earnings per share of listed agricultural companies in Nigeria,

The Effect of Gratuity Cost and Financial Measures

The effect of staff gratuity costs and financial performance has indicated a positive, negative, significant and insignificant effect from prior studies. Studies that indicated positive and significant include; Taibat et al. (2024) assessed the impact of human capital expenditure on the financial performance of listed insurance companies in Nigeria. The findings of the study revealed that employee's retirement benefits have significant positive impact on the financial performance of Insurance companies in Nigeria. Abolo (2022) finding of the study were; that recruitment and hiring costs significantly influence return on assets of listed commercial banks in Nigeria. Also, that compensation cost significantly influence return on assets of listed commercial banks in Nigeria. Nwauzor and Longjohn (2020) result showed that, the relationship between compensation cost and market share is positive and statistically significant. Onoriode (2022) result revealed a significant influence and positive relationship between Human capital investment, welfare cost and financial performance of listed manufacturing companies. However, the following prior studies indicated negative and insignificant and they include; Abraham et al. (2022) study revealed that; staff remuneration have no significant effects on market value using TQ while cost of staff training has a significant effect on market value of a listed deposit money bank using TQ. Festus and Albert (2020)

investigated result show that human capital does not have significant positive impact on performance of the banks. Ofurum and Adeola (2018) result revealed that there is no significant relationship between human resource accounting and the profitability of quoted firm.

Due to the above mix results about the effect staff gratuity costs on financial performance, the researcher formulated the below hypothesis

Ho₄: Staff gratuity costs has no significant effect on earnings per share of listed agricultural companies in Nigeria,

The Moderating effect of firm size on human capital costs and financial performance Measure

Based on the knowledge of the researchers only few studies have been carried out with regard to how firm size moderate the relationship between human resource accounting and financial performance. For instance, Abolo (2022) study showed that there is significant influence of firm size in the relationship between human asset accounting and financial performance of listed commercial banks in Nigeria. Adewole et al. (2019) study shows that increase in the level of profitability increase in the size of a firm have significantly affected the share price of a firm. Nwauzor and Longjohn (2020) study showed that the moderator variable firm size do not moderate the relationship between human capital accounting and financial performance. Mutalib et al (2017) found that firm's age, size, and industry classification have significant positive influence on human capital disclosure. In contrast, the auditor type, profitability, inherent risk, and joint audit revealed significant negative influence on human capital disclosure. However some studies found a negative and weak association between size and firm performance. Močnik and Širec (2015) carried out a study of firm size and corporate financial performance in Slovenia. The result indicated a negative association between firm size and corporate financial performance. Newstyle and Major (2022) result of the study showed that firm size has positive and insignificant moderating relationship with intellectual capital cost and financial performance of listed healthcare firms in Nigeria.

Due to the above mix results about the moderating effect of firm size on human capital costs and financial performance Measure, the researcher formulated the below hypothesis

Ho₅: Firm size has no significant interaction effect on the relationship between human capital costs and earnings per share of listed agricultural companies in Nigeria.

Theoretical Review

Human Capital Theory

This study was based on the human capital theory proposed by Schultz (1961) and extensively developed by Becker (1964). The theory has its root from labour economics which is a branch of economics that focuses on general work force in quantitative term. According to the theory, Human capital theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers' future income through increase in their lifetime earnings. According to Bassey and Tapang (2012) human capital theory distinguished between general skills and firms' specific skills of human resources. General skills are skills possessed by individuals which provide value to a firm and are transferable across a variety of firms. For instance, all competitor firms have the potential to accrue equal value by acquiring employees with knowledge of general management, the ability to apply financial ratios, or general cognitive ability. On the other hand, specific skills provide value only to a particular firm, and such skills are of no value to competing firms. An instance of this is the knowledge of how to use a particular technology used only by one firm, or knowledge of a firm's policies and procedures provided to that firm, but usually would not be valuable to other firms. Since training is regarded as an investment, it involves costs

and benefits, which can be assessed by using financial criteria such as present value and the internal rate of return. Initially, Becker (1962) studied the impact on wage levels of two types of human capital operating in a perfectly competitive labour market that had no imperfections distortions. The form of human capital can be transferred to other organizations that encourage employees to cover costs and achieve all the benefits of education. The theory of human capital is based on neoclassical theories on labour markets, education and economic growth. It is assumed that employees are productive resources and try to find out if highly educated employees are more productive than other employees.

The relevance of the theory to this study is that it considered the cost of employees, training and development cost and value added intellectual coefficients as assets towards improving productivity of individual workers and also creates a sort of competitive advantage which ultimately could result in improved financial performance. Thus, if these are invested like other physical assets which are reflected on the income statement and statement of financial position. The theory asserted that widespread commitment in human capital creates in the labour-force the skill-base indispensable for growth of economic agent. It thus captured that the survival of the human capital reserve has been said, for example, to explain the rapid reconstruction achieved by the Dutch people during World War II. Human capital comes from every activity that can increase the individual productivity of employees.

Empirical Review

Table 1 Summary of Empirical Review

<i>S/ N</i>	<i>Author & Year of Study</i>	<i>Topic</i>	<i>Methodology</i>	<i>Key findings</i>	<i>Individual Research Gap</i>
1	Jack (2025)	investigated the impact of human capital cost on the financial performance of listed commercial banks in Nigeria from 2009 to 2023	The study employed descriptive statistics and multiple regression analyses.	Findings reveal significant variability in training costs and financial performance (ROA) among Nigerian commercial banks. Health safety costs demonstrate a positive and statistically significant relationship with ROA. Conversely, no statistically significant relationship is found between training costs and ROA.	The study was commercial banks in Nigeria while the current study is conducted in listed agricultural companies in Nigeria
2	Nyeche et al. (2025)	examined the effects of human capital investment on industrial sector output in Nigeria from 1990 to 2022	The study adopted Autoregressive Distributed Lag (ARDL) technique as the main data analysis technique.	The findings of this study indicated that investment in education has a positive and significant effect on industrial sector output in Nigeria in both short run and long run, investment in research and development has a positive and significant effect on industrial sector output in Nigeria in the long run while investment in health has a positive and non-significant effect on industrial sector output in	The study was industrial sector output in Nigeria while the current study is conducted in listed agricultural companies in Nigeria

					Nigeria in both short run and long run.	
3	Newstyle (2025)	determined the effect of human capital development on economic performance in Nigeria.	This study utilized Descriptive statistic, Unit Root Test, diagnostic tests such as Breusch-Godfrey serial correlation LM test, Breusch-Pagan Heteroskedasticity test was adopted. And ARDL Regression analysis with the aid of E-View 10 was also employed for testing for hypotheses.	The findings from the study revealed that there is no significant effect of capital development on education and real gross domestic product in Nigeria in the short run but there is a significant effect of capital development on education and real gross domestic product in Nigeria in the long run, there is a significant effect of capital development on health and real gross domestic product in Nigeria for both short run and long run, there is no significant effect of capital development on education and misery index in Nigeria for both short run and long run, there is no significant effect of capital development on health and misery index in Nigeria for both short run and long run.	The study was economic sector output in Nigeria while the current study is conducted in listed agricultural companies in Nigeria	
4	Chukwu et al. (2025)	investigated the relationship between human capital investments and financial performance of selected listed insurance companies in Nigeria	The study employed descriptive statistics and multiple regression analyses.	The results of the study revealed that investments in staff training and retraining have positive and significant relationship with returns on equity of the selected insurance firms. Besides, staff welfare investment as well as staff health investment showed positive and significant relationship with returns on equity	The study was listed insurance companies in Nigeria while the current study is conducted in listed agricultural companies in Nigeria	
5	Daffa et al. (2025)	studied the impact of intellectual capital and corporate governance on financial performance in Indonesia's financing services sector	The analysis technique used was the classical assumption test and multiple regression analysis in SPSS 22	The findings of the study indicated that intellectual capital gauged by VACA and STVA positively affect ROA, while VAHU negatively affect ROA, VAHU has a negative impact on ROA if investment in human capital is not balanced with the resulting productivity.	The study was Indonesia's financing services sector while the current study is conducted in listed agricultural companies in Nigeria	
6	Taibat et al. (2024)	assessed the impact of human capital	Panel Least Square analysis method was used	The findings of the study revealed that employees' salaries and wages and	The study was listed insurance companies in	

		expenditure on the financial performance of listed insurance companies in Nigeria	to analyze the collected data	employee's retirement benefits have significant positive impact, and employee's training costs and other employee's benefits have no significant impact on the financial performance of Insurance companies in Nigeria.	Nigeria while the current study is conducted in listed agricultural companies in Nigeria
7	Adu and Olomola (2024)	examined the effect of human resource accounting) and on the financial performance of Deposit Money Banks (DMBs) in Nigeria	the data were analyzed using regression analytical method	It was found out that salaries and wages, training, health and safety had significant positive influence on capital employed of deposit money banks in Nigeria and salaries and wages, training, health and safety had significant positive influence on return on capital employed.	The study was Deposit Money Banks (DMBs) in Nigeria while the current study is conducted in listed agricultural companies in Nigeria
8	Major and Dumle (2023)	studied the effect of human capital costs on financial performance of listed healthcare firms in Nigeria	Ex-post facto research design, Descriptive Statistics, Unit Root Test and Ordinary Least Square Regression were employed with the aid of Microsoft Excel, SPSS 25 and E-View 12.	The result of the study showed that training and development cost has negative and significant effect on return on assets. Furthermore, the result indicated that an employee cost has positive and significant effect on return on assets. It was also revealed that health and safety costs have negative and insignificant effect on return on assets of listed healthcare firms in Nigeria	The study was conducted in healthcare firms in Nigeria while the current study is conducted in listed agricultural companies in Nigeria
9	Olayinka et al (2023)	investigated human resource accounting and sustainable growth of consumer goods companies	Ex-post-facto research design and Ordinary least square regression estimation was employed	The study found that human resource accounting has significant impact on sustainable growth of consumer goods companies. Gross staff cost had positive significant relationship with firm sustainable growth. Safety and health cost have negative significant impact on firm sustainable growth. However, training and development cost had an insignificant relationship with firm sustainable growth	The study was conducted in consumer goods companies in Nigeria while the current study is conducted in listed agricultural companies in Nigeria
	Newstyle and Major (2022)	Investigated the relationship between intellectual	Descriptive statistics, unit root test and ordinary least	The result of the study showed that training and development cost has significant relationship with	The study was conducted in listed healthcare

capital cost and financial performance of listed healthcare firms in Nigeria	Square regression were employed with the aid of Microsoft Excel, SPSS 25 and E-View 12	return on capital employed. Furthermore, the result indicated that employee cost significant relationship with return on capital employed. It was also revealed that health and safety cost has insignificant relationship with return on capital employed of listed healthcare firms in Nigeria	firms in Nigeria while the current study is conducted in listed agricultural companies in Nigeria
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Source: Compiled by Author's (2025)

Methodology

The underlying philosophy of this study is positivism, wherein the cardinal principle is founded in the belief that reality is stable and can be observed and described from an objective viewpoint. The researcher believes that an objective and comprehensive knowledge of the phenomenon resides outside the mind and could therefore be more appropriately investigated using realist epistemology. Ex-post facto research design was used to cover investigations that are done retrospectively (after the effect has occurred) to identify possible cause-and-effect relations between the variables under investigation through observations of existing conditions and inquisitively searching back historically for the causal factors. The targeted population of this study consists of all the listed five (5) agricultural companies in the Nigerian Exchange Group (NGX) with a period of ten (10) years 2014-2023.

Table 2 Listed Agricultural companies in the Nigeria

S/N	Agricultural companies
1.	Ellah Lakes Plc
2.	FTN coca processors Plc
3.	Livestock Feeds Plc
4.	Okomu Oil Plam Plc
5.	Preco Plc

Source: www.ngx.com.ng

The sampling technique used in this study was census sampling technique. As the name implies, it is a sample "chosen purely on the basis of convenience. Five (5) listed agricultural companies were chosen simply because as at the time of this research work and analysis, only five agricultural companies that were listed in Nigerian Exchange Group. The study used secondary data for the analysis. Secondary data was collected from published annual reports of the five agricultural companies in the Nigerian Exchange Group Fact Book.

Table 3 Measurement of Variables

Variables	Measures/ Abbreviations	Explanation	Mathematical Expression	Sources
	Staff training cost (STC)	Staff training costs are seen as expenditures incurred on staff or employees for capacity building in order to maximize performance (that is profit).	Staff Training cost are extracted direct from note to the accounts	Adegbayibi et al (2024), Olayinka et al (2023), Newstyle and Major (2022a), Chukwu (2018)

Independent Variables	Health and Safety Cost (HSC)	Health and Safety cost are medical expenses entail costs incurred by the entity to ensure the health of their employees. It involves mostly medical bills and other health-related expenses such as health insurance expenses	Summary of medical expense security cost and worker compensation.	Kankpang (2024), Major and Dumle (2023), Newstyle and Major (2022b)
	Salaries and wages Cost (SWC)	These are the remuneration paid or payable to employees for work performed on behalf of an employer or services provided. It is also a fixed amount of money paid to a worker usually measured at monthly and annual basis, not hourly	Natural Log of the value of welfare cost on the note to the account	Obi & Okoro (2024), Newstyle and Major (2022a), Abolo (2022), Chukwu (2018),
	Staff Gratuity Cost (SGC)	Gratuity is a lump sum amount paid by the employer to the employee as a token of appreciation for the services they have provided toward the company	Natural Log of the value of gratuity on the note to the account	Adegbayibi et al (2024), Okeke (2023), Abolo (2022), Nwauzor and Longjohn (2020)
Dependent Variable	Earning Per Share (EPS)	Earnings per Share (EPS) are the portions of a company's profit allocated to each outstanding share of a shareholder	For purpose of this study, EPS are extracted direct from the income statement	Onyinyechi and Ihendinihu (2017), Newstyle and Major (2022b), Chukwu (2018).
Moderating Variable	Firm size	Size is the grouping of companies, including large, medium, and small companies, into several groups that represent the growth rate of sales value and total assets	Natural Log of Total Assets	Newstyle and Major (2022a) and Researcher (2024)

Model Specification

The model used for this study was adapted from Umar et al, (2019) where it was written as:

Model: Earnings Per Share (EPS) Model

$EPS = f(STC, HSC, SWC, SGC, FS)$ i

This can be written in Panel Least Square (PLS) form as:

$$EPS_{it} = a_0 + a_1STC_{it} + a_2HSC_{it} + a_3SWC_{it} + a_4SGC_{it} + a_5FS_{it} + U_{it} \dots\dots\dots ii$$

$$a_1 > 0; a_2 > 0; a_3 > 0; a_4 > 0; a_5 > 0$$

The work equally evaluated the moderation or interaction effect of firm size (FS) on the relationship between human capital costs and financial performance indices earnings per share (EPS) of listed agricultural companies in Nigeria.

The Moderated Multiple Regression (MMR) techniques was used and is specified by adding an interaction term to the unmoderated multiple regression model in equations ii and iv to arrive at the following MMR models viz:

$$EPS_{it} = a_0 + a_1STC_{it} + a_2HSC_{it} + a_3SWC_{it} + a_4SGC_{it} + a_5FS_{it} + \beta_6STC_{it} * FS_{it} + \beta_7HSC_{it} * FS_{it} + \beta_8SWC_{it} * FS_{it} + \beta_9SGC_{it} * FS_{it} + U_{it} \dots\dots\dots (ii)$$

Where:

$STC_{it} * FS_{it}$ = interaction term for staff training cost and firm size
 $HSC_{it} * FS_{it}$ = interaction term for health and safety cost and firm size
 $SWC_{it} * FS_{it}$ = interaction term for salaries and wages cost and firm size

$SGC_{it} * FS_{it}$ = interaction term for staff gratuity cost and firm size

Method of Data Analysis

This study employed descriptive statistics; Unit Root Tests, Diagnostic Test, Hausman Test and Panel Least Squares, and Moderated Multiple Regression techniques for the purpose of data analysis. The E-views version 12 was used for the descriptive statistics; unit root tests on the other hand were performed to ascertain the stationarity state of the dataset as well as the regression technique of Panel Least Squares (PLS). The Statistical Packages for the Social Sciences (SPSS) 20.0 was used to execute the Moderated Multiple Regression techniques for the moderating variable.

Data Analysis and Discussion of Findings

Table 4 Descriptive Statistics of the Variables

	STC	HSC	SWC	SGC	EPS	FS
Mean	4.492522	4.672966	5.063687	4.794916	177.2012	7.362325
Median	4.641180	5.207420	4.544437	4.640453	11.55000	7.143360
Maximum	6.897068	6.951111	7.365592	6.229058	2176.000	9.079181
Minimum	2.000000	1.919078	3.442166	3.267641	0.050000	6.426213
Std. Dev.	1.306010	1.430569	1.231067	0.652925	457.5579	0.778210
Skewness	-0.111737	-0.267151	0.708018	0.112535	3.302598	0.878358
Kurtosis	2.581989	1.877017	2.286111	3.629978	13.44876	2.815555
Jarque-Bera	0.468071	3.222019	5.239153	0.932352	318.3441	6.500153
Probability	0.791334	0.199686	0.072834	0.627397	0.000000	0.038771
Sum	224.6261	233.6483	253.1843	239.7458	8860.060	368.1163
Sum Sq. Dev.	83.57744	100.2798	74.26076	20.88922	10258600	29.67491
Observations	50	50	50	50	50	50

Source: Author Computation, (2025) using E-Views 12

As it is presented in the table, it includes the mean, standard deviation, number of observations, minimum, maximum, skewness and kurtosis for the dependent and independent variables of the model. It shows the average indicators of variables computed from the Nigeria Exchange Group (NGX) financial report. The independent variables Staff Training Costs (STC), Health and Safety Costs (HSC) Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC) reported a mean value 4.492, 4.672, 5.064 and 4.794 respectively for the time frame investigated. The results disclosed that dependent variable earnings per share (EPS) reported a mean value 177.201. The descriptive statistics also disclosed the standard deviation values of the variables on Staff Training Costs (STC), Health and Safety Costs (HSC) Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC), earning per share (EPS) and firm size (FS) that reported 1.306, 1.430, 1.231, 0.652, 457.55 and 0.778 respectively. This signified that the mean and standard deviation values for all the variables are clear indications that the variables are not constant over time. However, the skewness statistics indicated that all the variables are positively skewed which shown the variables has a long right tail except firm size. The corresponding probability values of the Jarque-Bera test statistics disclosed that Staff Training Costs (STC), Health and Safety Costs (HSC) Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC) variables are all normally distributed at 5% significant level while earning per share (EPS) and firm size (FS) variables are not normally distributed at 5% significant level is less. Therefore, the researcher carryout unit root test and some diagnostics test in order to determine the normality level of the variables before regression estimation.

Unit Root Test

Table 5: Summary of Unit Root Test Result

Variables	ADF - Fisher Chi-square	ADF - Choi Z-stat	ORDER OF INTEGRATION	REMARKS
STC	0.0347	0.0292	1(0)	Stationary
SHC	0.0062	0.0056	1(0)	Stationary
SWC	0.0065	0.0384	1(0)	Stationary
SGC	0.0000	0.0000	1(0)	Stationary
EPS	0.0408	0.0125	1(0)	Stationary
FS	0.0006	0.0024	1(0)	Stationary

Source: Researcher Computation using E-Views, 12

Table 5 shows the results of Augmented Dickey Fuller (ADF) unit root test on the variables at 5% critical level utilized in this investigation. The table depicted that all the variables of interest are 1(0) or stationary at level. This is supported by the P-values with regards to ADF FISHERS are smaller than the alpha value of 5%. The null hypothesis of panels unit root is therefore rejected with 95% certainty. This indicates that the data series have been cleansed of unit root.

Multivariate Data Analysis (Regression Analysis)

The purpose of this section is to test the eight research hypotheses stated in Chapter one excluding hypotheses five of this study. This is centered on the establishment of the effect of predictor on the criterion variables. To test the multiple regressions, Random effect and Fixed effect regression model has been developed to verify the cause and effect relationship between the dependent and independent variables.

Table 6 Hausman Test for Model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.732157	4	0.0195

Source: Researcher Computation using E-Views, 12

The Hausman test was carried out to decide which of the fixed and random effect model is appropriate for this analysis. The result of the test with a probability value of 0.019 implies that fixed effect is appropriate for this analysis.

Table 7: Regression Analysis of Model

Dependent Variable: EPS
Method: Panel Least Squares
Date: 08/20/25 Time: 02:24
Sample: 2014 2023
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
STC	143.0990	227.7765	0.628243	0.5334
HSC	98.11230	156.9880	0.624967	0.5355
SWC	-424.4463	179.5239	-2.364288	0.0230
SGC	101.7929	140.1295	0.726420	0.4718
FS	135.2767	110.6797	1.222236	0.2288
C	-219.1037	1462.053	-0.149860	0.8816

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.619695	Mean dependent var	216.5212
Adjusted R-squared	0.534126	S.D. dependent var	563.9343
S.E. of regression	384.9132	Akaike info criterion	14.92077
Sum squared resid	5926326.	Schwarz criterion	15.30317
Log likelihood	-363.0192	Hannan-Quinn criter.	15.06639
F-statistic	7.242072	Durbin-Watson stat	1.700282
Prob(F-statistic)	0.000004		

Source: Author's Computation, (2025) using E-Views 12

Results in table 7 above showed that $R^2 = 0.619$ and adjusted $R^2 = 0.534$ that measured the proportion of the variations in earnings per share (EPS) of dependent variable attributed to Staff Training Costs (STC), Health and Safety Costs (HSC), Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC) of independent variables implied that, the dependent variable explained 53.4% (percent) of the variations in to Staff Training Costs (STC), Health and Safety Costs (HSC), Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC) of independent variables. The remaining variation of 46.6% is the error term that attributed to other factors not included in the model. The F-statistic, 7.242 with a Prob (F-statistic) value of 0.000 showed that the model satisfies the overall goodness-of-fit statistical test. This means that earnings per share (EPS) measures of financial performance were are able to explain Staff Training Costs (STC), Health and Safety Costs (HSC), Salaries and Wages Cost (SWC) and Staff Gratuity Cost (SGC) of human resources costs in the study. The Durbin-Watson Statistic of 1.700 explained that the model does not contain serial correlation which affirmed that the Residual Cross- Section Dependence Test and Residual Histogram Normality Test result in table 7 and figure 2 is adequately tested.

Statistical Test of Hypotheses

Statement of Hypotheses

The following hypotheses were stated to be tested at the 0.5 level of significance.

H_{01} : Staff training costs has no significant effect on earnings per share of listed agricultural companies in Nigeria.

Decision Rule: Accept H_0 if $P > 0.05$. Otherwise reject

Decision: The result in table 7 discovered a significant level between staff training costs (STC) and earnings per share (EPS). The t-statistics of 0.628 indicated that there is a positive effect of staff

training costs (STC) on earning per share (EPS). That is 1% increase in staff training costs (STC) would contribute to 0.628% increase in earnings per share (EPS). The probability value $P = 0.5334 > 0.05$ revealed that the significant effect of staff training costs (STC) on earnings per share (EPS) is statistically insignificant at 0.05 alpha level. Thus the null hypothesis one is accepted which implied that staff training costs has no significant effect on earnings per share of listed agricultural companies in Nigeria.

H_{02} : Health and safety costs has no significant effect on earnings per share of listed agricultural companies in Nigeria,

Decision Rule: Accept H_0 if $P > 0.05$. Otherwise reject

Decision: The result in table 7 discovered a significant level between Health and Safety Costs (HSC) and earnings per share (EPS). The t-statistics of 0.624 indicated that there is a positive effect of Health and Safety Costs (HSC) on earning per share (EPS). That is 1% increase in Health and Safety Costs (HSC) would contribute to 0.624% increase in earnings per share (EPS). The probability value $P = 0.5355 > 0.05$ revealed that the significant effect of Health and Safety Costs (HSC) on earnings per share (EPS) is statistically insignificant at 0.05 alpha level. Thus the null hypothesis two is accepted which implied that health and safety costs has no significant effect on earnings per share of listed agricultural companies in Nigeria.

H_{03} : Salaries and wages costs has no significant effect on earnings per share of listed agricultural companies in Nigeria

Decision Rule: Accept H_0 if $P > 0.05$. Otherwise reject

Decision: The result in table 7 discovered a significant level between salaries and wages costs (SWC) and earnings per share (EPS). The t-statistics of -2.364 indicated that there is a negative effect of salaries and wages costs (SWC) on earning per share (EPS). That is 1% increase in salaries and wages costs (SWC) would contribute to -2.364% decrease in earnings per share (EPS). The probability value $P = 0.0230 < 0.05$ revealed that the significant effect of salaries and wages costs (SWC) on earnings per share (EPS) is statistically significant at 0.05 alpha level. Thus the null hypothesis three is rejected which implied that salaries and wages costs has no significant effect on earnings per share of listed agricultural companies in Nigeria.

H_{04} : Staff gratuity costs has no significant effect on earnings per share of listed agricultural companies in Nigeria

Decision Rule: Accept H_0 if $P > 0.05$. Otherwise reject

Decision: The result in table 7 discovered a significant level between staff gratuity costs (SGC) and earnings per share (EPS). The t-statistics of 0.726 indicated that there is a positive effect of staff gratuity costs (SGC) on earning per share (EPS). That is 1% increase in staff gratuity costs (SGC) would contribute to 0.7262% increase in earnings per share (EPS). The probability value $P = 0.4718 > 0.05$ revealed that the significant effect of staff gratuity costs (SGC) on earnings per share (EPS) is statistically insignificant at 0.05 alpha level. Thus the null hypothesis four is accepted which implied that staff gratuity costs has significant effect on earnings per share of listed agricultural companies in Nigeria.

Diagnostic Test Result for Model

The following sections discuss the results of the diagnostic tests that were conducted to ensure whether the data fits the basic assumptions of the classical linear regression model. The implication of the test, limits therein, test results and their discussion are also presented.

Table 8 Residual Cross-Section Dependence Test for Model

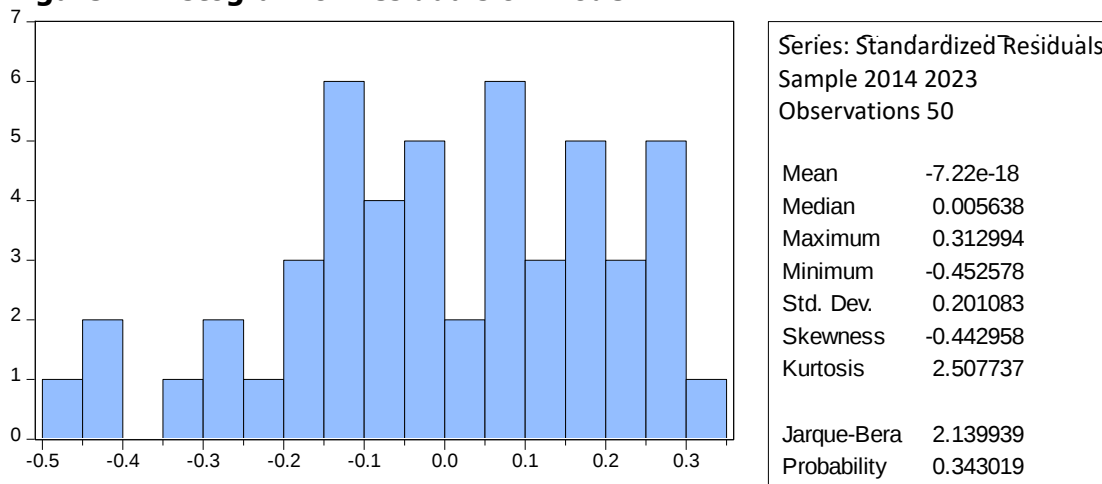
Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals
Equation: Untitled
Periods included: 10
Cross-sections included: 5
Total panel observations: 50
Note: non-zero cross-section means detected in data
Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	6.337006	6	0.3865
Pesaran scaled LM	0.097285		0.9225
Pesaran CD	0.056178		0.9552

Source: Author Computation, (2025) using E-Views 12

The table 8 above disclosed diagnostic test using Residual Cross-Section Dependence Test as criteria for decision. The result indicates that there is no residual cross-section dependence in the panel estimation. This implies that the panel model one has a goodness fit since the Pro values of the three method under the Residual Cross-Section Dependence Test is greater than 0.05 and this means that that the residuals are normally distributed hence regression model can be estimated.

Figure 2: Histogram of Residuals on Model



Source: Author Computation, (2025) using E-Views 12

The figure 2 above disclosed diagnostic test using normality test of residuals histograms as criteria for decision. The result indicates that the skeweness value is negative implies that the model has short right tail, the Jarque-Beta probability value is greater than 0.05 ($0.343 > 0.05$) and this means that that the residuals are normally distributed hence regression model can be estimated.

Moderated Multiple Regression (MMR) Estimates of Model (3) in EPS

Statement of Hypothesis

H₀₅: The moderating effect of firm size on the relationship between human capital costs and earnings per share of listed agricultural companies in Nigeria is not significant.

Table 9a: Model Summary^c Moderation Analysis of Firm Size in EPS Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.311 ^a	.097	.016	.15136	.097	1.204	4	45	.322	
2	.535 ^b	.286	.147	.14096	.190	2.722	4	41	.042	2.068

a. Predictors: (Constant), SGC, STC, SWC, HSC
b. Predictors: (Constant), SGC, STC, SWC, HSC, INTSGC, INTSTC, INTSWC, INTHSC
c. Dependent Variable: EPS

Source: Author Computation using SPSS, 23

Table 9a provides information on the unmoderated and moderated results obtained from earnings per share (EPS) model. The Durbin-Watson statistic value 2.068 is within the acceptable range of 1 to 3 specified by Field (2009) and this affirmed that the problem of autocorrelation is unlikely to exist in the series. The unmoderated and moderated R^2 for the earnings per share (EPS) specifications are 0.535 and 0.286 respectively that accounted for 53.5% and 28.6% of the variations in earnings per share (EPS) while 46.5% and 71.4% was explained by unknown variables that were not included in the Moderated Multiple Regression model in earnings per share (EPS). However, for purposes of testing the set hypothesis on the change statistics and other valuable information resulting from the interaction effect of firm size. The unmoderated and moderated R^2 for earnings per share (EPS) model are 0.535 and 0.286 respectively resulting to R^2 change of 0.190. This indicated an increase of 19.0% (0.190×100) in the variation explained by the addition of the interaction term in the earnings per share (EPS) model.

Table 9b Summary of Moderation Analysis of Firm Size in EPS Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.734	4	3.683	14.284	.000 ^b
	Residual	11.604	45	.258		
	Total	26.338	49			
2	Regression	21.113	5	4.223	35.556	.000 ^c
	Residual	5.225	44	.119		
	Total	26.338	49			

a. Dependent Variable: EPS
b. Predictors: (Constant), SGC, STC, SWC, HSC
c. Predictors: (Constant), SGC, STC, SWC, HSC, (INT)FS

Source: Author Computation using SPSS, 23

Table 9b provides information on the unmoderated and moderated results obtained from earnings per share (EPS) model. The model has F-statistic values 14.284 and 35.556 in its unmoderated and moderated specifications with respective Prob. ** value 0.000^b and 0.000^c indicated that the unmoderated and moderated models are properly fitted since the Prob. ** value is less than the decision criterion of 5%.

Table 9c Coefficients of Moderation Analysis of Firm Size in EPS Model

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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		B	Std. Error	Beta		
1	(Constant)	.264	.239		1.104	.275
	STC	-.035	.025	-.302	-1.420	.163
	HSC	.053	.025	.500	2.173	.035
	SWC	.001	.020	.007	.043	.966
	SGC	-.044	.042	-.190	-1.049	.300
2	(Constant)	.442	.367		1.204	.235
	STC	-.934	.683	-7.990	-1.367	.179
	HSC	.838	.602	7.851	1.391	.172
	SWC	.208	.338	1.678	.616	.542
	SGC	-.142	.309	-.607	-.459	.649
	INTSTC	.124	.101	6.807	1.225	.228
	INTHSC	-.110	.088	-7.341	-1.245	.220
	INTSWC	-.028	.045	-1.928	-.616	.542
	INTSGC	.010	.046	.350	.229	.820

a. Dependent Variable: EPS

Based on the results of the F change statistic value 2.722 with Prob. ** value of $0.042 < 5\%$ chosen decision criterion for earnings per share (EPS) model. The study to rejected the null hypothesis (H_{05}) and concluded that the moderating effect of firm size on the relationship between human capital costs and return on assets of listed agricultural companies in Nigeria is significant.

Conclusion

This study established empirical evidence assessed the effect of human capital costs on financial performance of listed agricultural companies in Nigeria. Based on the data obtained from the annual financial reports of the listed agricultural companies from Nigeria exchange group; the data were presented and analyzed, findings were discussed. Therefore, the study concluded that;

1. Staff training costs has positive and insignificant effect on earnings per share of listed agricultural companies in Nigeria.
2. Health and safety costs has positive but insignificantly affect earnings per share of listed agricultural companies in Nigeria.
3. Staff salaries and wages costs has negative but significantly affect earnings per share of listed agricultural companies in Nigeria.
4. Staff gratuity costs has positive and insignificant effect on earnings per share of listed agricultural companies in Nigeria.
5. Firm size has positive and significant interacting effect on the relationship between human capital costs and return on assets of listed agricultural companies in Nigeria.

Note: The study generally concluded that the effect of human capital costs on financial performance of listed agricultural companies in Nigeria is statistically insignificant for the period spanning from 2014 - 2023.

Recommendations

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

1. It is recommended that agricultural companies in Nigeria should carefully consider and invest in competitive and fair staff training costs for their employees. This can contribute to efficient financial performance of the companies.
2. Although the study did not find a statistically significant impact of health and safety cost on financial performance of the sampled agricultural companies, it is recommended that agricultural companies in Nigeria should recognize the importance of medical expensive and organizational capabilities. While the direct financial impact of the expenditure may be limited and not obvious in a short while, the health and safety cost remains essential for long-term success of the companies.
3. The study recommends that the management of agricultural companies should pay greater attention to health and safety cost when paying dividend to equity holder because the result affirmed that health and safety cost has significant effect on earnings per share.
4. The management of listed agricultural companies in Nigeria should give priority to staff gratuity cost because it affect financial performance in term of earnings per shares positively.
5. Management of agricultural companies and others sector should give priority to firm size and also engage in continuous evaluation of firm size because this study result showed positive moderating relationship firm size on human resources costs and financial performance.

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