

Human Capital Expenditure and Firms' Earnings of Listed Natural Resources Companies in Nigeria

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ABSTRACT

The rationale for recruiting employees in an organization is to contribute immensely to the company's earnings. This study assessed the correlation between human capital expenditure and firms' earnings of listed natural resource companies in Nigeria. Data gathered from published accounts of four listed companies were analyzed using descriptive and inferential statistical tools and regression analytical technique. Results showed that salary/allowances accounts for 24.9% variation in total earnings, medical/welfare 4.3%, training 4% with a combine effect of 22% which implies positive salary/allowances but insignificant relationship with total earnings, combination of salary, medical and training expenditures. It, therefore, concluded that organizations should spend more on medical, welfare and training of staff in order to contribute positively to the earnings of the organizations. It was recommended that employers of labour should enhance salaries, training of staff and provision of medical, and other welfare incentives to boost performance and in turn, increase earnings of the companies.

Keywords: *Human Capital, Expenditure, Salary, Medical, Firm, Earnings.*

1. INTRODUCTION

Human capital refers to the economic value of a worker's experience and skills. Human capital includes education, training, intelligence, skills, health, and other things employers value such as loyalty and punctuality. As such, it is an intangible asset or quality that isn't (and can't be) listed on a company's balance sheet. Human capital is perceived to increase productivity and thus firms' earnings in form of profitability (Donou-Adonsou et al, 2021).

Human capital investment in the firms involves the expenditures the employers incur on their employees in order to develop their skills and also provide the healthy working environment. Research has shown that the more employers invest in human capital due to a higher price of skills, the more it increases the return to use human capital intensively which also increases the return to investment (Balogun et al, 2023). Human capital expenditures involve costs, which the firms hope to achieve a return in the future (Olabode and Ayoboye, 2023).

Human Capital Expenditure are costs incurred by organizations on its staff in form of salaries/allowances, medical and training expenses and so on. Human capital represents labour utilized as a factor of production. There are compensations given to employees to make them perform optimally. These include salary and allowances, medical and other welfare benefits, staff training and others (Balogun et al, 2023).

Salary is made up of basic pay. It is a monthly remuneration given to workers as compensation for services rendered. Added to this are allowances which include transport allowance, housing allowance, meal allowance and some others. When these are added to the basic salary, they constitute total emolument of every employee medical/welfare allowance (Obialor, 2020).

Some organizations monetize medical allowances while others engage medical outfits and personnel to handle every matter regarding the medical/health challenges faced by the staff in the course of employment. There are medical clinics and hospitals where the organizations maintain retainer-ship for the purpose. Welfare allowance can come in the form of life assurance, policies taken by the company for the staff death benefit, end-of-year bonuses and so on. Training of staff is a major factor in the performance of employees and optimum performance in the work place. This is why many organizations embark on local and foreign training of its workforce annually. There are some who undergo indoor training that is within the organization while some undergo external training in academic institutions and training schools depending on the need of the individual and that of the business place (Obialor, 2020).

Earnings are the core intention of an organization. These are returns on investments. Earnings are profits made in the company as a result of past investments in working capital, acquisition of non-current assets and in other structures for the operation of the organization. These depend on what the enterprise was created to perform. Whether they intend to produce goods or services or engage in trading. In this work, all the organizations are in the natural resources section of the Nigerian economy. They are Thomas Wyatts, Aluminium Extrusion, Industrial and Medical Gases (formerly, BOC), and Multiverse Mining & Exploration Plc (Donou-Adonsou et al, 2021).

1.2 Statement of the Problem

Perey (2021), defined human capital as an intangible asset stemming from a person's talent and experience. According to Kenton (2023) human capital is an intangible asset not listed on a company's balance sheet. Leddy (2017), looked at human capital (HC), as the most important asset of an organization and as such, is an intangible asset, even though it becomes difficult to assign a value to it in the statement of financial position. Despite the fact that human capital is not captured in the Statement of Financial Position of an organization, its services are expected to contribute to the profitability of the organization. With all that has been spent by the listed companies in the natural resources sector of the economy in the form of salary/allowances, staff training, medical expenses to staff. This study intends to find out to what extent human capital has contributed to the earnings of the companies.

Objectives of the Study

The main objective of this study is to assess the relationship between human capital expenditure and firms' earnings of listed natural resource companies in Nigeria. The specific objectives are to:

- (i) Examine the relationship between Salary/Allowances expenditure and Total Earning of listed natural resources companies in Nigeria for a period of ten years.
- (ii) Examine the correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years.
- (iii) Determine the relationship between training expenditure and Total Earnings of listed natural resources companies in Nigeria for a period of ten years.

- (iv) Assess the combined correlation between salary/allowances, medical/welfare, and training expenditure on Total Earnings of listed natural resources companies in Nigeria for a period of ten years.

Research Questions

- (i) What is the relationship between Salary/Allowances expenditure and Total Earning of listed natural resources companies in Nigeria for a period of ten years?
- (ii) What is the correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years?
- (iii) What is the relationship between training expenditure and Total Earnings of listed natural resources companies in Nigeria for a period of ten years?
- (iv) What is the combine correlation effects of salary/allowances, medical/welfare and training on Total Earnings of listed natural resources companies in Nigeria for a period of ten years?

Research Hypotheses

- H₀₁: There is no significant positive relationship between salary/allowances expenditure and Total Earnings of listed natural resources companies in Nigeria for a period of ten years.
- H₀₂: There is no significant positive correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years.
- H₀₃: Training expenditure has no significant positive relationship with Total Earnings of listed human resources companies in Nigeria for a period of ten years.
- H₀₄: There is no combined significant relationship between salary/allowances, medical/welfare, and training expenditure on Total Earnings of listed natural resources companies in Nigeria for a period of ten years.

2.1 Conceptual Review

2.1.1 Concept of Human Capital

The term and theory of “Human Capital” gained popularity in the 1960s through studies by Gary Becker and Theodore Schultz. They were looking at the valuation or the capabilities of human resources to the business entities. They came to a conclusion that human resources were as important to the organization as other intangible assets for a competent production process. According to Corporate Finance Institute (2015), Adam Smith published his book “An Inquiry into the Nature and Causes of the Wealth of Nations” in the 1800s where he examined a nation’s wealth, knowledge, training, skills, and experiences. Smith proposed that increasing human capital through training and education results in a more lucrative company which then contributes to the collective wealth of the society.

The human capital theory acknowledges that not all work is created equal. To increase the quality of human capital, employers need to invest in training their personnel. The training can be in the form of staff education in a formal school or in-house, giving the employee the opportunity to gain wide experience on the job. The benefit from these is to provide significant economic impact on employers, organizations, and the economy as a whole. The process of educating a workforce is a type of investment, but instead of capital investment such as equipment, the investment is in human capital (Nicholas, 2023). Perry (2021) separates human capital into three types: knowledge capital, social capital, and emotional capital. Knowledge capital consists of trade, school education, university degree, hard skills, work experience, situational knowledge and intelligence. Social capital comprises relationships, fame, social status, professional network as well as health while Emotional capital has to do with emotional intelligence, creativity, problem-solving ability, personal resilience, critical thinking, loyalty, leadership behaviours and other soft skills.

Human capital can be assessed through their communication skills, higher education, working intelligence, technical and non-technical qualification, capacity of judgment, innovation in approach towards work, and the brand worth of an individual, e.g., a celebrity who is paid for an endorsement (Corporate Finance Institute, 2015). Bringing human capital to its best, there is need to remunerate with salary/allowances, medical incentives and quality training.

2.1.2 Salary/allowances

Salary is the monthly pay given to the employee by the employer. It is made up of basic pay. It is not all that is stated as an employee's basic pay that is given out every month. This pay is subjected to tax which the employee deducts and remit to the relevant tax authority on a monthly basis. Added to the basic pay are allowances. They include housing allowance, transport allowance, meal subsidy and other allowances. Tax laws in the country provide thresholds after which every additional amount paid as allowance is taxable. Organizations are meant to be familiar with the tax laws to apply accordingly. Default in proper implementation of the tax deductions result in penalties (Obialor, 2020).

2.1.3 Medical/Welfare expenditure

A hard-working staff must be hale and hearty (robust and vigorous). It is when this is in place that the staff can perform at his best. Building on this purpose, organizations permit their staff to go on casual leave as well as annual leave in order to relax and return with the energy to function. Since it is possible to breakdown just as machines do, companies make provision for the medical treatment of its workforce annually. They do this by having a retainer-ship arrangement with a clinic or hospital. This is where staff are referred to or visit whenever they are indisposed. Capable organizations do not limit how much they can bear on the treatment of their staff. Some extend such treatments to the spouse and four children of the staff. Welfare packages are also instituted for staff. They include taking life assurance policy for the staff, providing for leave allowances and death benefits also. Good welfare package encourages employees to be at their optimum, thereby giving their best to the organization (Olabode and Ayoboye, 2023).

2.1.4 Training Expenditure

Training is vital to the performance of employees at their best. Knowledge is a wasting asset. Innovations take place every moment and workers need be abreast of new things which can affect their performances. New knowledge can be received through in-house training or attending formal education in higher institutions or good training schools within the country or abroad. Training is not only when an employee is to update his knowledge in his field of employment. Where there is need to move to another section

of the organization, there is need to undergo such training. There are instances where a store officer is trained to become an information officer. Training is inevitable to all employees at different levels.

2.1.5 Firms' Earnings

Organizations invest on assets in order to make profits or earnings. Return on Assets is therefore the ratio indicating how much profit a company is generating from its assets. It shows the efficiency of management in earning profits from their economic resources or assets. Return on Assets (ROA) in this study is calculated as a percentage of profit/(loss) after tax divided by average total assets. Average total asset is the average of total asset at the end of a period plus total asset at the end of the previous period. *Average total assets* are used in calculating ROA because a company's asset total can vary over time due to the purchase or sale of vehicles, land, or equipment, as well as inventory changes or seasonal sales fluctuations. As a result, calculating the average total assets for the period in question is more accurate than the total assets for one period. ROA is shown as a percentage, and the higher the number, the more efficient a company's management is at managing its assets to generate profits (Boyte-White, 2022).

For an organization to earn a good profit, employees must be well remunerated with living wages commensurate with their output or performance. Such pay is not limited to salary and allowances but include medical allowances to enable them take care of their health whenever they are challenged. Welfare packages come in different forms based on the nomenclature any establishment wants to put it. This includes subsidized meals and other perquisites. Accommodations are provided to staff, some are chauffeur-driven to and from the company, and others receive long-service awards. Training is given to employees to put them at their best in effectiveness and efficiency. Salary/allowances, medical/welfare packages, and training are all geared towards making the workers produce at their optimum towards total earnings of the organizations they represent.

2.2 Theoretical Framework

2.2.1 Human Capital Theory

This theory states that the more educated a person becomes the more, they will be desired for their specific knowledge. It relates to the knowledge economy because it

highlights the common assertion that increase their human capital. This connection directly places economic value on knowledge obtained. The connection between human capital theory and the knowledge economy becomes more evident when exploring the assumptions within the theory of human capital. Human capital theory assumes that investment in education is necessary to acquire skills and training which, in turn, will increase individual capital. These knowledge and skills will increase his or her productivity in the workplace. The increased productivity will bring a higher salary to the individual since the wage of a person, in the ideal labour market, is determined by the person's productivity. Therefore, people would invest in education up to the point where the private benefits from education are equal to the private cost (Robinson and Pope, 2023).

2.2.2 Theory of Knowledge Economy

This theory sees scientific and engineering discoveries as paramount for the development of any economy. It is believed that production and sale of knowledge should be widespread if any economy is to improve its gross domestic products. This knowledge can be seen in the form of patents or other intellectual property protections. The producers of such information, such as scientific experts and research laboratories are also considered part of the knowledge economy. The knowledge economy addresses how education and knowledge - that is, human capital can serve as a productive asset or business product to be sold and exported to yield profits for individuals, businesses, and the economy (GovTrack 2018). This component of the economy relies greatly on intellectual capabilities instead of natural resources or physical contributions.

In the knowledge economy, products and services that are based on intellectual expertise advance technical and scientific fields, encouraging innovation in the economy as a whole. The World Bank defines knowledge economies according to four pillars: Institutional structures that provide incentives for entrepreneurship and the use of knowledge; Availability of skilled labour and a good education system; Access to information and communication technology (ICT) infrastructures.

A vibrant innovation landscape that includes academia, the private sector, and civil society. Academic institutions, companies engaging in research and development (R&D), programmers developing new software and search engines for data, and health workers using digital data to improve treatments are all components of a knowledge economy. These economy brokers pass on the results of their research to workers in more traditional fields, such as farmers who use software applications and

digital solutions to manage their crops better, advanced technological-based medical procedures such as robot-assistant surgeries, or schools that provide digital study aids and online courses for students. This work hinges on Human Capital Theory because our concentration is on human capital and its effect on total earnings of listed natural resources firms in Nigeria.

2.3 Empirical Review

Wilson and Briscoe (2004) studied the impact of human capital on economic growth. This review provided an in-depth appraisal of a wide body of international research that examines the links between education and training in a country and its macroeconomic growth. An initial analysis of broad statistics for all EU Member States suggests a loose correlation between investment in human resources and growth in gross national product (GNP), but clear causal relationships are difficult to establish. Increased investment in education is shown to lead to higher productivity and earnings for the individual. Similarly, such investment results in significant social rates of return. The returns on investment in vocational training are more difficult to demonstrate. This study reviews a large number of growth models that attempt to specify and quantify the GNP and human resource relationship. Wide differences are found in the model specifications, the quality of the data inputs and the results obtained.

Other links between investment in human capital and economic performance are reviewed using diverse literature sources on human resource management, corporate market value, economic size and industry structure. The indirect impact of education on non-economic benefits is also examined in the context of the technological, spatial and environmental gains to society. The study concluded that, overall, the impact of investment in education and training on national economic growth is positive and significant. Recommendation is that Governments should provide incentives to firms to invest in the education and training that enhances their innovative capabilities. In particular, attention needs to be paid to the role of the small firm in contributing to R&D and so to overall economic growth. Often small firms may not have sufficient resources to invest in training their workforce, but they can be expected to benefit from training carried out by larger firms when the trained workers subsequently move to new jobs in the small firms.

Akpoghelie (2016) studied on Human Capital Development and Economic Growth in Nigeria. The study attempted to provide empirical evidence on the role of human capital development (proxied by federal government expenditure on health,

education, gross fixed capital formation, primary, secondary and tertiary school enrolment and other social and community services) on economic development process from 1980 to 2012. The study applied the auto-regressive distributed lag (ARDL) bounds testing approach to co-integration. The estimated long run relationship established the positive contribution of human capital development in the economic growth process of Nigeria. The impact however was low relatively to the contributions of physical capital accumulation. It concluded that Job-creating growth sustenance in Nigeria requires a conscious effort of government and the private sector over how much to invest in health and education (emphasizing human capital development) as well as enhancing labour intensive growth. Government investing in both education and health is particularly important as there are indirect benefits of such investments which individuals may not allow for their investment decisions.

Although, there had been some form of improvements in the funding of education and health, this has not been proportionate to the rise in physical capital in view of their complementarities. Adequate skills are thus needed to match the growth in machines. It recommended investment in both machines and people simultaneously, adjustment in the admission process in favour of core sciences and technical oriented courses with adequate funding of schools. Furthermore, government should re-structure the curricular of higher education making it more practical oriented more importantly in technical and engineering courses. Adequate practical that could solve day-to-day problems should be emphasized. Due emphasis should be placed on-the-job training for a sustainable economic growth in Nigeria.

Kucharčíková (2011) researched on Human Capital definitions and approaches. The result of the research was focused on monitoring expert opinions on the nature of human capital and the location of this economic category in economic theory and management theory. The result of research was proposal for the structure of theoretical approaches towards understanding the nature of human capital and its place in science. The article specifically emphasized the macroeconomic approach and the importance of human capital in production functions and for the achievement of extensive and intensive economic growth, too. The paper concluded that New growth theory is based on the assumption that the production function is not affected only by labour and capital but also by education, improving the quality of labour and capital, better infrastructure which are unaffected by exogenous but endogenous. This means that the growth of education and upgrading skills operate as a multiplier which makes for faster economic growth. It then recommends that human capital should be exposed to more training which should not be done internally only, but also external to the organization.

2. METHOD

Ex-post facto research design was adopted in this study. This design is appropriate because past data is used in the study and it will not be manipulated hence the behaviour of the data would not be changed. It is a Pooled Data because data sets came from different sources, different companies over many years. These companies were Thomas Wyatts, Aluminium Extrusion, Industrial and Medical Gases (BOC), and Multiverse Mining & Exploration Plc.

The researcher chose to study on the companies from the latest years of the companies' activities upward to the next ten (10) years in order to cover a reasonable period. No sampling technique used to select the period for the study since the researcher used a panel data/pool. Regression analysis was used to analyse the data with total earnings being the dependent variable while human capital cost (consisting of salary/allowances, medical/welfare and training expenditures were taken as independent variables. The analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0.

3. RESULTS AND DISCUSSION

The research hypotheses were tested in this section of the study. In line with the model specifications shown thus;

$$\text{LogTE} = \alpha + \beta_1 \text{LogSA} + \varepsilon$$

$$\text{LogTE} = \alpha + \beta_1 \text{LogMW} + \varepsilon$$

$$\text{LogTE} = \alpha + \beta_1 \text{LogTR} + \varepsilon$$

$$\text{LogTE} = \alpha + \beta_1 \text{LogTOT} + \varepsilon$$

Table 4.1: Summary of the Result of the Test

	Hypothesis 1	Hypothesis 2	Hypothesis 3	Hypothesis 4
Adjusted R ²	24.9%	4.39%	4%	22%
F critical	4.0848	4.0848	4.0848	4.0848
F calculated	12.24	1.682	0.154	10.421
Level of sig.	0.05	0.05	0.05	0.05

Test of Hypotheses

The hypothesis one (H_{01}) of the study states that there is no significant positive relationship between salary/allowances expenditure and Total Earnings of listed natural resources companies in Nigeria for a period of ten years is rejected and the alternative hypothesis accepted since the F-cal 12.24 is greater than 0.05 level of significance. This implies that there is positive but insignificant relationship between Salary/allowances and Total Earnings of listed natural resources companies in Nigeria.

Table 4.1 shows a an adjusted R^2 of 4.39 and F-cal value of 1.682 greater than 0.05 significance level led to the acceptance of the second Hypothesis which states that there is no significant correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years and rejection of the alternative hypothesis. This emphasizes that there is no significant correlation between Medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria.

From Table 4.1, hypothesis three (H_{03}) which states that training expenditures has no significant positive relationship with Total Earnings of listed natural resources companies in Nigeria for a period of ten years is accepted and the alternate rejected with an adjusted R^2 value of 4.0 and F-cal of 0.154 greater than the 0.05 level of significance. This implies that there is no significant positive relationship between Training expenditures and Total Earnings of listed natural resources companies in Nigeria.

Table 4.1 showed that adjusted R^2 value of 22.0 and F-cal of 10.421 greater than the 0.05 level of significance. Thus, hypothesis four (H_{04}) which states that there is no combined significant relationship between salary/allowances, medical/welfare and training expenditure on Total Earnings of listed natural resources companies in Nigeria for a period of ten years is hereby accepted and the alternative hypothesis rejected. This indicates that there is no significant relationship between Total expenditure on Staff and Total Earnings of listed natural resources companies in Nigeria.

Findings from hypothesis one revealed that the alternative hypothesis was accepted since the F-cal 12.24 is greater than a 0.05 level of significance. This implies that there is positive but insignificant relationship between Salary/allowances and Total Earnings of listed natural resources companies in Nigeria. Table 4.1 shows a an adjusted R^2 of 4.39 and F-cal value of 1.682 greater than 0.05 significance level which emphasizes that there is no significant correlation between Medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria.

Also, Table 4.1, shows that hypothesis three (H_{03}) which states that training expenditures has no significant positive relationship with Total Earnings of listed natural resources companies in Nigeria for a period of ten years is accepted and the alternate rejected with an adjusted R^2 value of 4.0 and F-cal of 0.154 greater than the 0.05 level of significance. This implies that there is no significant positive relationship between Training expenditures and Total Earnings of listed natural resources companies in Nigeria.

Similarly, Table 4.1 also showed that adjusted R^2 value of 22.0 and F-cal of 10.421 greater than the 0.05 level of significance which indicates that there is no significant relationship between Total expenditure on Staff and Total Earnings of listed natural resources companies in Nigeria.

From our computations, we discovered that Thomas Wyatt was making losses between 2014 and 2020. This resulted in the negative ROA for the company. The same thing happened to Multiverse Mining & Exploration Plc which loss spanned 2013 to 2020. Aluminum Extrusion and Industrial and Medical Gases made profits all through the years in our study. On Medical/Welfare expenditures, Multiverse only provided for it in 2019 to 2022. Thomas Wyatt provided for Training in 2020, 2022 and 2023 while Multiverse only provided for it in 2022.

4. CONCLUSION

The research set out to assess the relationship between human capital expenditure and firms' earnings of listed natural resource companies in Nigeria. The specific objectives of the research was to examine the relationship between Salary/Allowances expenditure and Total Earning of listed natural resources companies in Nigeria for a period of ten years, examine the correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years, determine the relationship between training expenditure and Total Earnings of listed natural resources companies in Nigeria for a period of ten years, and to assess the combined correlation between salary/allowances, medical/welfare, and training expenditure on Total Earnings of listed natural resources companies in Nigeria for a period of ten years.

Data were collected from Pooled Data sets from different sources of different companies over many years. These companies were Thomas Wyatts, Aluminium Extrusion, Industrial and Medical Gases (BOC), and Multiverse Mining and Exploration Plc. companies from the latest years of the companies' activities upward to

the next ten (10) years in order to cover a reasonable period. No sampling technique was adopted in selecting the period for the study since the researcher used a panel data/pool. The quantitative approach was deemed suitable hence the regression analysis was used to analyse the data with total earnings being the dependent variable while human capital cost (consisting of salary/allowances, medical/welfare and training expenditures were taken as independent variables. The analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0.

Result of hypothesis one shows that there is an insignificant relationship between Salary/allowances and Total Earnings of listed natural resources companies in Nigeria.

Similarly, hypothesis two tested showed that there is no significant correlation between medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria for a period of ten years. This emphasizes that there is correlation (though minimal) between Medical/welfare expenditures and Total Earnings of listed natural resources companies in Nigeria.

Hypothesis three which states that training expenditures has no significant positive relationship with Total Earnings of listed natural resources companies in Nigeria for a period of ten years is accepted and the alternate rejected. This implies that there is no significant positive relationship between Training expenditures and Total Earnings of listed natural resources companies in Nigeria.

Hypothesis four which states that there is no combined significant relationship between salary/allowances, medical/welfare and training expenditure on Total Earnings of listed natural resources companies in Nigeria for a period of ten years is accepted and the alternate rejected. This indicates that there is no significant relationship between Total expenditure on Staff and Total Earnings of listed natural resources companies in Nigeria.

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