# HUMAN RESOURCE ACCOUNTING CONTRIBUTION TO THE PROFITABILITY OF NIGERIAN PUBLICLY TRADED CONGLOMERATE COMPANIES

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This study is aimed at evaluating the impact of human resource accounting for the profitability of Nigerian listed conglomerate companies. The secondary data used in the study were collected from the audited annual reports of the six conglomerate companies quoted on the Nigerian Stock Exchange in the period from the year 2010 to 2019. The panel regression technique was adapted for the purpose of the analysis of the collected data. The results show that the cost of staff training and staff development, changes in employees' salaries and post-employment benefits have a positive significant impact on the profitability of the Nigerian conglomerate companies. The study then concludes that human resource accounting positively contributes to the profitability of Nigerian conglomerate companies and provides the recommendations reading that Nigerian companies should invest more in their employee training and development.

**Keywords:** human resource accounting, training and development, salary, benefit, profitability

## INTRODUCTION

The widespread interest in globalization comes with a remarkable impact on the global competitive business environment. Every business organization has the aim to be a market leader, which comes together with being equipped in every single aspect of the modern-day business trend. The globalization of a company has to do with meeting the current standard of trends or patterns of business operations. Unless companies are capable of inventing these trends, they have to be fast in adopting them or otherwise they will be playing catch-up, simultaneously losing their market share. Currently, there is a shift in the business trend and every organization is trying to fit in in the trend. Perhaps the most challenging aspect of this business trend is the fact that, in today's corporate climate, value creation drivers have shifted from physical and monetary resources to human resources (Cuganesan, 2006). As a result of this shift, there is a present need for data about these drivers, as well as the evolution

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of human resource accounting (HRA) to have these needs met (Bokhari, Qureshi, Bashir & Hijzi, 2012).

Human resources have always been at the helm of entities' affairs. Resource planning, organization and coordination have always been the job performed by man. Every business decision on what to produce, who to produce for and how to produce something has to be made by a human. Therefore, there is always the need to have the best in class of human resources because every other business resource depends on the quality of the human input that is to be optimally utilized. To be the best requires both education and training, the experience that leads to development, and motivation in terms of remuneration and post-employment benefits. More recently, there has been an increased interest in information relating to the quality of the human resources of an organization. Hence the need for human resource accounting.

Both internal and external accounting information users can benefit from human resource accounting. The information HRA provides assists internal users, such as management, in deciding on human resource utilization, employment, and in promulgating decisions on training, promotion, transfers, and human capital retrenchment. It provides the basis to the physical resource planning in relation to human resources (HR) and surveilling the costs incurred for exerting an influence on worker's further schooling, training, and improvement and the advantages gained (in the form of productivity) by the organization, among other things. HRA also provides valuable information to external users (e.g. potential investors) for investment decision-making. HRA could be seen as an information system that provides users with financial information pertaining to the cost incurred in enhancing the quality of human resources and to how such quality relates with the company's other resources so as to improve the overall productivity and profitability in order to attain organizational goals.

HRA is beneficial in achieving the management's economic goals and could form the basis for the essential information for external users, such as investors, to make investment-related decisions. The incorporation of suitable human asset information in distributed fiscal statements would presumably offer monetary expressions more significant in anticipating future performance, which is the investor's major concern (Lal, 2019). However, human capital value to the company denotes the current value of all the future services expected the company's employees throughout their employment tenure (Flamholtz, 2012).

Although human capital valuation is gaining in popularity in contemporary time and although theories and techniques have been formulated for this sake, the largest number of companies in developing countries, such as Nigeria, still need to fit in in the trend. Most companies are only catching up with the trend investing in human resources and devising ways how to keep their employees motivated to increase their own productivity. These companies, however, have not fully realized the benefits of the trend. The conglomerate sector of the Nigerian Exchange Group is one of the largest sectors in terms of capitalization and one of the biggest employers of human resources in Nigeria. Therefore, there is the need to assess how companies have keyed into the global trend of human resource accounting and how it has influenced their performance. Nigeria is one of the leading economies in Africa and a likely world competitor. Therefore, it is necessary to evaluate how Nigerian companies are faring in global trends.

Despite companies' huge investments in human resources in recent times, the expected benefits have not been produced, though. These investments are taking away companies' capital and funds, thus causing a significant adverse effect on their profitability. Training and development results have for the most part not been transferred to companies' productivity, thereby leading to the waste of resources and a poor financial effect. Experience has shown that engaging the same and fewer workers to produce the same number of outputs or to meet certain productivity levels often leads to the stressing of the existing human resources, thereby leading to low productivity and a reduction in the financial result (Lal, 2019).

Moreover, it is quite unfortunate that most organizations have reduced their contributions to the defined employee benefit in favor of the defined contribution account, which lowers the benefits received by employees after their service period, thereby hindering the staff's morale by discouraging them from using their full strength towards production, thus leading to low productivity and low sales, and consequently leading to a poor financial result (Okwudili, 2015).

Relatively, there are a bulk of prior studies on the subject matter that are either extant or focused on some other sectors of the Nigerian market different from the conglomerate sector. Apart from this, their findings are inconclusive, which is because there are studies that found a positive impact, there are studies that found a negative impact, and there are, however, studies that found no significant impact at all. Therefore, there is the need to evaluate the aforementioned problem from the perspective of the conglomerate sector of the Nigerian stock market. The question of how the cost of staff training and development and the cost of change in employees' salaries and post-employment benefits affect the profitability of publicly traded conglomerate companies in Nigeria is yet to be answered. Hence the motivation for this research study.

Generally, this study is aimed at assessing the impact exerted by HRA on the profitability of Nigerian publicly traded conglomerate firms. However, the specific objectives are to:

- determine the extent of the influence of the cost of staff training and development on the profitability of the listed Nigerian conglomerates,

- assess the influence of the cost of salary change on the profitability of the listed conglomerates in Nigeria, and

- evaluate the impact of the cost of post-employment benefits on the profitability of the listed conglomerate firms in Nigeria.

Based on the foregoing research objectives, the following research hypotheses were formulated, reading:

H1: The cost of staff training and development significantly affects the profitability of the listed Nigerian conglomerates.

H2: The cost of salary change has a significant effect on the profitability of the publicly traded conglomerates in Nigeria.

H3: The cost of post-employment benefits significantly influences the profitability of the Nigerian listed conglomerate firms.

The impact of HRA on the profitability of the publicly traded conglomerate entities in Nigeria is examined in the study. This sector was chosen due to the greater strength the staff of the sector possesses and the sector's contribution to economic growth. The conglomerate sector of the Nigerian stock market is one of the biggest in terms of capitalization. For the reason of that fact, it is more likely to spend hugely on human resources because it needs them. The study covers the period from 2010 to 2019 due to the high volume of retrenchment recorded in different sectors of the Nigerian economy during said period.

The remainder of this study is divided into three parts in addition to the Introduction. The literature review is covered in Section Two. The methodology is explained in Section Three. Section Four is dedicated to data analysis, the discussion of the findings, the conclusion and the recommendation.

## LITERATURE REVIEW

### Human resource accounting and profitability

Human resources (HR) are the fundamental resources accessible to any business. This is the motivation behind the statement reading "our greatest assets are our people", recognized in the annual reports prepared by the largest number of companies (Enofe, Mgbame, Otuya & Ovie, 2013). S. Fajana (2016) focused on the way how HR had been perceived as one of the significant wellsprings of the upper hand according to the performance of many companies

in the contemporary economy. The private sector companies especially broadly differ and have zeroed in on human resources as having particular vital significance for the growth of the company. According to M. M. Kirfi and A. Abdullahi (2012), estimating the value of human resources helps management keep up with changes in the quantity and quality so that a balance can be achieved between required assets and available human resources.

Human resource accounting is becoming one of more essential aspects in an organization's success and the efficacy of its managers. As a result, it is critical that organizational reports should accurately provide the evidence that the entirety of the resources are so employed and produced to help the company achieve its goals. In L. Divinney, G. Richard, W. Yip and C. Johnson (2008) opinion, the following aspects of organizational outcomes are included financial (profits, ROA, and ROI), market performance (sales, a market share), and shareholder return (the total shareholder return, economic value added). In academics, whoever wants to learn more about any aspect of management should pay close attention to organizational performance. Results measuring is the concern of accounting. Customer satisfaction and a market share are the primary concerns of marketing. Productivity and the cost of operations are the main concerns of operations management. Personnel satisfaction and structural efficiency are the key concerns in organizational behavior. An MBA is concerned with organizational performance.

According to E. A. Odhong', S. Were and J. Omolo (2014), profitability refers to a company's ability to make a profit from all of its operations. They further add the fact that profitability refers to the money by which an entity's management setting may profitably use all of the company's and market's resources to maximize the profit. According to L. Harward and S. Upton (2012), profitability is the gauge of management efficiency that may be used to push firms towards better efficiency by presenting it as a major yardstick for assessing management efficiency.

In order to evaluate whether the standard level of performance has been met or not, the basic performance level can be examined by a variety of methods. In this study, a profit margin (PM) was employed to assess performance. These figures represent a firm's efficiency in employing its total assets, simultaneously maintaining the company's financial policy. It also provides information about the company's value added, which leads to better results. However, none of the studies has examined the employed profit margin to assess a conglomerate firm's performance. As a result, this research study includes a profit margin as a metric for measuring performance in order to improve the existing literature. A low net profit margin indicates that management is unable to effectively manage its activities. A higher ratio is preferable. A profit multiplied by 100 divided by sales equals a net profit margin.

## The Cost of Training and Development and Performance

The expense on training and development improves employees' skills and the company's performance (Solkhe & Chaudhary, 2011). According to J. Rajashekharaiah (2014), training and development are also fascinating since they help to build and reequip a diversified workforce which helps to provide the numerous skills needed to maintain and improve the company's performance. I. H. S. Chow (2005) asserts that training and development are the most important aspects of human resource accounting. Formal training is a component of the training and development activities that help employees improve their skills and expand their knowledge beyond their current employment.

According to T. O. John (2016), training and development are the human resource skills that encompass both formal and informal knowledge outside the present positions for current employees. Employee performance is affected by the cost of training and development, which improves their skills, knowledge, behaviors, and dedication, as well as their decision-making when carrying out their

responsibilities (Moghaddam, Kakhaki & Pakdelan, 2014). In I. Shaira's (2012) opinion, country-specific differences influence keeping records of the cost of training and development, as well as anticipated differences and similarities in their magnitude. Adhering to R. Roslender, J. Stevenson and H. Kahn's (20006) opinion, it is a company's critical duty to offer an environment in which employees may complete their training.

## Changes in Salary and Performance

Organizations have to identify the variables that motivate people to perform at their best. Employees are expected to be motivated by compensation increases in the form of annual bonuses on their basic income (Baughman, DiNardi & Holtz-Eakin, 2012). High earnings, the job status and working conditions, job security, promotion, and decent working circumstances should all be top motivators for employees. Organizational performance is frequently thought to have a positive impact on employees' emotional states as a result of compensation increases (Kelvin & Chin, 2018). Every firm must be able to determine the amount of the compensation provided to its employees in such a way that the lowest salary possibly meets their needs (Kanzunnudin, 2007). B. E. Okwudili (2015) advocated for the relevance of changes in wages in Nigeria, stating that compensation changes should not only be adequate, but they should also demonstrate some element of equity, which is especially true from the employees' point of view.

In a country like Nigeria, anything short of a good relationship and a fair wage can swiftly enrage employees. Wages and a pay are extremely important to many Nigerian workers. They are crucial because a worker's life and the life of their families become highly precarious without the sufficient amounts of such wages and pays. Changes in pays are the most stressed direct cash benefits by employees, for the reason of which fact the same take the central position in the scheme of things when labor rewards are taken into consideration (Falola, Ibidunni & Olokundun, 2014)

## The Cost of Post-Employment Benefits and Performance

Most companies have shifted their defined benefit plans to defined contribution accounts, essentially transferring the financial risk of the post-employment benefits such as retirement to individual workers. Even when employees receive such benefits, the contributions paid by employers have grown increasingly limited, while employees' share of the cost has risen (Özutku, 2012). Employee benefits refer to any form of compensation provided by a company in exchange for the services provided by its employees (IAS 19). According to the source, the benefit is divided into a short-term employee benefit, the post-employment benefit for the termination of the employment contract, and equity participation as a type of compensation (Luchak & Gellatly, 2002). According to A. A. Luchak and I. R. Gellatly (2002), benefits are a diverse program that offers employees a variety of rewards in addition to their income or salaries. The post-employment perk has the potential to help the company's growth and profitability.

## THEORETICAL BACKGROUND

## Resource-Based Theory

This theory was proposed by Penrose in 1959. The resource-based theory of firms combines the strategic management concept and the organizational economics concept. A resource is a type of the production factor that is available to a firm, implying that it is managed by the firm despite the fact that the firm has no property rights to it. Firms earned a competitive edge by developing a value-creating and sustaining strategy that is difficult to copy and has no immediately substitutable alternatives (Barney, 1991). To achieve a competitive advantage, two requirements must be met. First, a company's resources have to be interchangeable with those of its competitors, and second, these resources have to be protected, i.e. they have to be difficult to obtain. Both independent and dependent variables are captured by this theory. As

an alternative, resource-based theory provides a way for a firm to examine its competitive advantages as a result of the resources it has at its disposal. A firm is conceptualized as a unique bundle of the productive resources used by managers in the firm's resource-based theory (Lockett & Wild, 2014). This theory's central premise implies that businesses can succeed if they can achieve and retain a competitive edge (Porter, 1985).

Human resource theory is relevant to this subject matter since it explains the necessity of staff training and development, employee growth moderation, and post-employment benefits for the development of an organization.

## Empirical review

The effect of the HRM functions on the performance of the power-and-lighting firms of Nairobi's western region was investigated by A. E. Rose, A. Were and J. Omolo (2016). The research relies on the original data sources. The results reveal that the human resource recruitment and performance functions have a major impact on organizational performance, as seen in a reduction in power outages, higher revenue levels, and the expanded customer base of a power-and-lighting company in Nairobi's western region. The study also discovers that the human resource hourly functions rely on return-on-capital-employed (ROCE) and have a beneficial impact on the performance of the firms in order to ensure a consistent performance increment.

F. Batista Fontana and C. B. Macagnan (2013) also conducted a study on the Brazilian capital market, concluding that the insufficient reporting of human resource accounting information in financial statements would result in misrepresenting financial statements. Their findings also suggested that the HRA data could be crucial in making internal managerial decisions. Its metrics are useful in demonstrating the fact that investing in a business's human resources may pay off in a distance future.

Using a simple regression model, A. O. Akindehinde, P. E. Enyi and A. O. Olutokunbo (2016) explore the impact of human asset accounting on the performance of 18 publicly traded banks in Nigeria. The study's findings reveal that human asset accounting has a substantial impact on bank performance.

I. O. Ikpefan (2017) investigated the link between human capital accounting and microfinance bank performance in Nigeria. The information was gathered from a secondary source. Human capital development has a favorable and significant impact on the overall performance of Nigerian microfinance banks in terms of the salary, wages, staff training and development, indicating that it has a good and significant influence on the microfinance banks' survival and their overall performance.

U. L. Onyekwelu, B. C. Osisioma and U. B. Ugwuanyi (2015) evaluate the impact of HRA on the financial performance and market valuation of the four quoted banks in Nigeria. The data were analyzed using the percentage and chi-square statistical tests. The result shows that, when investments in human capital are treated as assets and capitalized, there is a significant increase in the bank's net worth, as against the current practice where investments in human resources are dealt with as ordinary revenue expenses, thereby leading to the gross undervaluation of banks' income statements and financial position statements.

M. Slavkovic, G. Pavlovic and M. Simic (2018) examined employee recruitment and its relationship with employee satisfaction and verifying the mediating role of the employer brand. Their survey covered as many as 180 companies. The result showed that there was a significant relationship established between human resource management activities and employee satisfaction.

In the republic of Serbia, B. Bogicevic Milikic (2020) focused on the conceptual framework for designing the human resource management architecture. She highlighted the application of new models to both intra- and inter-organizational designs, the use of six design elements in the human resource management construction and the importance of knowledge management.

## Research gaps

Using the cost of training and development, salary changes, and post-employment benefit costs as proxies for human resource accounting and the profit margin as a proxy for profitability, the review of the literature revealed a lack of the comprehensive empirical literature that could highlight the impact of human resource accounting on organizational performance of the publicly traded conglomerate companies of Nigeria. This research study fills the vacuum in the current literature on human resources by combining the aforementioned HRA proxies as the variables in order to make contributions to the literature and the empirical evidence on the impact of human resource accounting on organizational performance in the period from 2010 to 2019.

This research study is focused on Nigerian conglomerate corporations. Furthermore, the study periods of the prior studies do not span five years. The current study employed a period of 10 years from 2010 to 2019, the data of which provided conclusive empirical evidence on the influence of HRA on the performance of publicly traded companies in Nigeria.

## METHODOLOGY

## Model Specification and Research Design

This study evaluates the nexus between HRA and the Nigerian quoted conglomerate companies' performance. I. O. Ikpefan's (2017) model was adopted and modified. The model was presented as follows:

$$S = a_0 + a_{ih} + U \tag{1}$$

The model of this study is I. O. Ikpefan's (2017) modified and extended model as the model did not incorporate some of the variables used in the present model.

The model of this study is written as:

$$PFT = f(HRA) \tag{2}$$

The model can be re-written as:

$$PFT = f(TDC, CSE, PEB) \tag{3}$$

The model can be written in an explicit form as:

$$PFT_{it} = \beta_0 + \beta_1 TDC_{it} + \beta_2 CSE_{it} + \beta_3 PEB_{it} + \varepsilon_{it} \tag{4}$$

where:

$PFT$ = the profitability proxy with (*a* profit margin (PM)).

$HRA$ = the human resource accounting proxy with (the cost of staff training and development (*TDC*), changes in employees' salaries (*CSE*), and a post-employment benefit (*PEB*).

$\alpha$ = the intercept of the models (the value assumed by the proxies for profitability when all the independent variables equal zero)

$\beta_1$ - $\beta_3$ = the parameters of the model to be estimated; they represent the slope of the model and measure the amount of change in the dependent variable caused by each independent variable.

$\mu_{it} = \varepsilon_{it} + \lambda_i$

$\varepsilon_{it}$ = the stochastic error term

$\lambda_i$ = the cross-sectional individual difference (the composite error)

The decision rule: the null hypothesis should be rejected if the P-value is at *a* < 5% significance level; otherwise, the same should be accepted.

The *a priori* expectation of this study is that $\beta_1$, $\beta_2$, and $\beta_3 > 0$.

*Ex post facto* research design is used in this study. Because the event has already occurred and the data have already been collected, it was impossible to either change or control them. The quantitative approach is employed in the study.

The conglomerate companies listed on the Nigerian Stock Exchange floor as of December 31, 2019, make up the study population. As of that date, the Nigerian Stock Exchange floor had six conglomerate

corporations listed. The population of the target sector is tiny. Hence the study uses the census sampling technique, making use of all the enterprises in the sector. As a result, the sample size for the study consists of all the six listed conglomerate businesses on the main board of the Nigerian Exchange Group as of December 31, 2019. The conglomerates include Chellarams PLC, John Holt PLC, SCOA Nigeria PLC, Transnational Corporation of Nigeria PLC, UACN PLC and Leventis Nigeria PLC.

## Data Collection Procedure

The main data source for the study was the audited published annual financial statements of all the companies in the population. The secondary source of data was used because the data for all of the variables were found in the companies' audited annual reports and financial statements.

## Data Analysis

For a systematic analysis of the data collected, both the descriptive and inferential statistical tools of analysis were employed. Panel regression analysis was the inferential statistics used. To estimate the specified models, this study employed the Fixed Effect Model (FEM) and Random Effect Model (REM) (i.e. the Error Composite Model) estimation techniques using the Hausman test. This was performed by doing a probability Breusch and Pagan Lagrangian multiplier test.

There are two variables in the study: the explained (dependent) variable and the explanatory (independent) variable. The dependent variable is the profitability represented by the profit margin of the firms included in the sample. The profit margin was measured as:

$$PM = \frac{Net\ Profit}{Turnover} \times 100$$

The independent variables, the human resource accounting proxy with (the cost of staff training and development (TDC), changes in employees' salaries

(CSE) and the post-employment benefit (PEB)) were measured by the unit naira cost as follows:

$$TDC = \frac{Net\ Profit}{Turnover} \times 100$$

$$CSE = \frac{Net\ Profit}{Turnover} \times 100$$

$$PEB = \frac{Net\ Profit}{Turnover} \times 100$$

## DATA PRESENTATION, INTERPRETATION AND ANALYSIS

### Preliminary Analyses

The descriptive statistics (the means, the standard deviations, the maximum and the lowest values) of the explained and explanatory variables are presented in Table 1.

**Table 1** The descriptive Statistics

| Variables | N | Mean | Std Dev | Mini | Max |
|---|---|---|---|---|---|
| PM | 60 | 0.1620 | 0.0847 | -2.1242 | 1.3953 |
| TDC | 60 | 41698 | 23189 | 2900.0 | 460339 |
| PEB | 60 | 85523 | 12243 | 8774.0 | 563981 |
| CSE | 60 | 25147 | 12954 | -49723 | 411478 |

*Source*: Authors

The dependent variable is the profitability proxy with the net profit margin (PM), whereas the independent variable is the human resource accounting proxy with the following variables: the costs of training and development (TDC), changes in employees' salaries (CSE), and the post-employment benefit (PEB) for the Nigerian conglomerate companies in the period from 2010 to 2019.

The table shows that the average value of the financial performance measured through the net profit margin is 0.1620, showing the result of the standard deviation

0.0847. The maximum and minimum values are 1.3953 and -2.1242, respectively, which implies that the standard deviation 0.0847 means a broad dispersion of the data from the mean value, showing moderate mean variations.

The average value of the cost of training and development of the companies included in the sample is ₦41698, with the minimum and maximum values ₦21698 and ₦460339, respectively, whereas the standard deviation is 23189, which reveals the presence of a moderate variation across the sampled firms. The average value of changes in the sampled firms' employees' salaries is ₦25147, with the minimum and maximum values ₦49723 and ₦411478, respectively, whereas the standard deviation is 12954 variations from the average value, which also reflects the presence of a moderate variation across the sampled firms. The average value of the post-employment benefit of the sampled companies is ₦85523, with the minimum and maximum values ₦8774 and ₦563981, respectively, whereas the standard deviation is 12243, which reflects the presence of a moderate variation across the sampled firms.

Table 2 accounts for the multicollinearity variance inflation factor for detecting a possible strong relationship between the independent variables, which violates the assumption estimation techniques.

**Table 2** The multicollinearity test - the variance inflation factors

| Variables | VIF |
|-----------|-----|
| PEB | 1.15 |
| TDC | 1.12 |
| CSE | 1.03 |

*Source*: Authors

The VIF shows which standard error is inflated due to the relationship between the dependent variables. As a general rule of thumb, the greater the value of the VIF, the more likely the occurrence of the multicollinearity problem. On the other hand, a VIF exceeding 5 calls for more examination. If a VIF exceeds 10, it suggests

serious multicollinearity requiring correlation. D. N. Gujurati (2004) noted that the closer the inverse value of the VIF to zero, the higher the multicollinearity problem degree. The closer to 1, the higher the sign that the regressors are ha no multicollinearity problem. The result, however, shows that the value of the independent variables exceeds 1, for the reason of which fact it can be concluded that there is no multicollinearity (Table 3). In place of this, there is no multicollinearity issue among the explanatory variables within this model as all the VIFs are lower than 10. The VIF is inversely related to tolerance. The VIF represents a measure of the amount of multicollinearity in a multiple regression framework. Tolerance measures the scale of the predictability of the specified variable unexplained by the other predicted variables in the model.

**Table 3** The Breusch-Pagan/Cook-Weisberg heteroscedasticity test

| Variable | Chi$^2$ | P-value |
|----------|------|---------|
| Model | 1.74 | 0.2527 |

*Source*: Authors

If the error term variance of the different conservations differs in a model, it is said to be heteroskedastic. The Breusch-Pagan test was used in this study to see if there were any heteroskedasticity problems in the model. The null hypothesis reads that error variances are equal, as opposed to the alternative that the error variance is the multiplication function of one or more variables, as determined by the Breusch-Pagan test. The null hypothesis was rejected since the P-value (0.2527) was greater than the 5% significance level. As a result, there is no concern with heteroskedasticity in these models. This means that the differences between the independent variables are quite minor.

## Hypotheses Testing: Regression Results

Table 4 shows the linear relationship between human resource accounting and the profitability of the Nigerian conglomerate firms. The table uses

Table 4  Human resource accounting and profitability

| Variables | Net Profit Margin | | |
|---|---|---|---|
| | Pooled OLS Model | Fixed-effect Model | Random-effect Model |
| Constant | 0.6881 (0.539) | 2.8467[*] (0.073) | 0.6291 (0.537) |
| TDC | 0.1894[***] (0.000) | 0.1550[***] (0.000) | 0.1984[**] (0.000) |
| CSE | 0.1324[***] (0.007) | 0.0159[**] (0.041) | 0.1324[**] (0.041) |
| PEB | 0.0701[**] (0.014) | 0.0497[**] (0.017) | 0.0702[**] (0.019) |
| LEV | 0.0444 (0.842) | 0.1505 (0.509) | 0.0881 (0.682) |
| F-stat | 14.14[***] (0.0000) | 12.21[***] (0.0000) | |
| Wald $X^2$ | | | 13.42[***] (0.0037) |
| R-Square (R2) | 0.5706 | 0.5695 | 0.5706 |
| Error term (S.E) | 0.0479 | 0.3659 | 0.4362 |
| Hausman Test | | 26.55 (0.0000) | |

Breusch and Pagan Lagrangian Multiplier Test

[*], [**], [***]: denotes significance at the 10%, 5% and 1% levels, respectively

Brackets:  denotes the P-value, while the value denotes the coefficients

*Source*: Authors

panel regression analysis to show the results of the pool OLS fixed-effect and random-effect models, as well as the results of the Breusch and Pagan Lagrangian multiplier test (the poolability test) and the Hausman test. The Hausman test was also used to determine which model was the best between the fixed-effect model and the random-effect model. The results obtained show that the fixed-effect model is the best, with the P-value (0.0000) lesser than the 5% significance threshold. Because a fixed effect is appropriate, there is no need to compute the Breusch and Pagan Lagrangian multiplier test.

The model's overall R-square (R2) determination coefficient suggests that the equation is appropriate with the independent variables accounting for 57% of the systematic variance in the net profit margin.

The study's first goal was to determine the signs and quantity of the cost of training and development (TDC) that had a positive and significant impact on the profitability of the Nigerian conglomerate enterprises, which is shown by the coefficient (0.1550) and the P-value (0.000), both being lower than the 5% significance level. The hypothesis one (H1) reading that the cost of staff training and development has a significant impact on the profitability of the Nigerian listed conglomerate companies is confirmed, which means that a 1% increase in the cost of training and development will result in a 15.5% increase in the profitability of the conglomerate firms in Nigeria.

Furthermore, the study's second goal, which was to determine the signs and amounts of changes in employees' salaries (CSE), was also accomplished, which means that it has a favorable and significant impact on the profitability of the Nigerian

conglomerate enterprises, which is evidenced by the coefficient (0.0159) and the P-value (0.041), both of which are lower than the 5% significance level. The hypothesis two (H2) that reads that change in the salary affects the profitability of the listed conglomerate companies in Nigeria is also confirmed, which means that a 1.59% increase in the profitability of the conglomerate companies in Nigeria will be made if there is a 1% increase in employees' salaries.

The study's third goal was also achieved by determining the signs and degree of the post-employment benefit (PEB), which has a favorable and significant impact on the profitability of the Nigerian conglomerate enterprises, which is accounted for by the coefficient (0.4497) and the P-value (0.017), both of which are lower than the 5% significance level. The hypothesis three (H3) reading that the post-employment benefit cost has a significant impact on the profitability of the listed conglomerate companies in Nigeria is confirmed.

Overall, the F-stat (12.21) with the P-value (0.0000) at the 5% significance level indicates that human resource accounting in the Nigerian conglomerates has a considerable impact on those conglomerates' profitability.

## Findings Discussion

The findings reveal that the cost of training and development has a positive significant impact on the profitability of the Nigerian conglomerate firms, thus being similar to the finding obtained by I. Mohammed (2011); L. C. Micah, C. O. Ofurum and J. U. Ihendinihu (2012); A. O. Enofe *et al* (2013); R. G. Ahangar (2014); E. W. Ifurueze, E. Odesa and J. E. Ifurueze (2014); F. I. Suliat, S. A. Mahayam and P. Chander (2014); P. O. Okpako, E. N. Atube and O. H. Olufawoye (2014); I. O. Ikpefan (2017) and M. Slavkovic *et al* (2018), who all found a positive and significant relationship, on the one hand, but differing from that obtained by N. Bontis, N. Dragonetti, K. Jacobsen and G. Roos (2015), on the other. According to G. O. Ijeoma and K. Aionu (2013), the study shows no statistically significant relationship between the factors.

The data also reveal that changes in employees' salaries have a positive significant impact on the profitability of the Nigerian conglomerate firms, the result being similar to the finding obtained by R. G. Ahangar (2011); I. Mohammed (2011); L. C. Micah *et al* (2012); A. O. Enofe *et al* (2013); E. W. Ifurueze *et al* (2014); F. I. Suliat *et al* (2014); P. O. Okpako *et al* (2014) and I. O. Ikpefan (2017), and, who all found a positive and significant relationship, on the one hand, but differing from that obtained by N. Bontis *et al* (2015), on the other. According to G. O. Ijeoma and K. Aionu (2013), the study shows no statistically significant relationship between the factors. Behavioral theory, human capital theory, and resource-based theory are all supported by the findings.

Furthermore, it demonstrates the fact that post-employment benefits have a big favorable impact on the profitability of the Nigerian conglomerate enterprises, the result being similar to that obtained by R. G. Ahangar (2011); I. Mohammed (2011); L. C. Micah *et al* (2012); A. O. Enofe *et al* (2013); E. W. Ifurueze *et al* (2014); F. I. Sulait *et al* (2014); P. O. Okpako *et al* (2014); and I. O. Ikpefan (2017), who all found a positive and significant relationship, on the one hand, yet differing from that obtained by N. Bontis *et al* (2015), on the other. According to G. O. Ijeoma and K. Aionu (2013), the study shows no statistically significant relationship between the factors. Behavioral theory, human capital theory, and resource-based theory are all supported by the findings.

In general, the findings demonstrate that human resource accounting has a beneficial impact on the profitability of the Nigerian conglomerate enterprises, which is supported by D. I. Maditinos, A. A. Mandilas, T. Gstraunthaler and A. P. Alonso (2009); R. G. Ahangar (2011); I Mohammed (2011); L. C. Micah *et al* (2012); A. O. Enofe *et al* (2013); F. Batista Fontana and C. B. Macagnan (2013); F. I. Sulait *et al* (2014); P. O. Okpako *et al* (2014); E. W. Ifurueze *et al* (2014); G. O. Edom, E. U. Inah and E. S. Adanma (2015); U. L. Onyekwelu *et al* (2015); S. Saeed, S. Z. A. Rasid and R. Basiruddin (2016); A. O. Akindehinde *et al* (2016); I. O. Ikpefan (2017) and B. Bogicevic Milikic (2020), but not supported by G. O. Ijeoma and K. Aionu (2013), or N. Bontis *et al* (2015). The findings are also consistent with resource-based theories.

## CONCLUSION

According to the research study, human resource accounting adds favorably to the profitability of the Nigerian conglomerate organizations. When the separate components of human resources (namely the cost of training and development, changes in employees' salaries/wages, and the post-employment benefit) are evaluated, it can be concluded that all the variables positively and significantly contribute to performance.

In terms of the coefficient sign denoting the impact of human resource accounting on the profitability of the Nigerian conglomerate companies, the result is positive, implying that all the variables are in agreement with the *a priori* expectations, further implying that there is a direct relationship between the dependent variables and the performance variables. The study's objectives were met by the sign and size of the coefficient of each single variable. The second objective highlighted in the study was also achieved. which shows that an increase in the profitability of the conglomerate companies in Nigeria will arise from an increase in employees' salaries. The result for the third objective reveals that an increase in the post-employment benefit will result in an increase in the profitability of Nigeria's conglomerate companies.

Behavioral theory, human capital theory, and resource-based theory are all supported by the findings. The study has contributed to the importance of investing in human resources through employee training, providing motivational incentives, improving salary packages and employee pension schemes. Overall, the three hypotheses (H1, H2, and H3) have all been confirmed.

The following recommendations were made based on the findings of this study:

- The Nigerian conglomerate enterprises should invest more in employee training and development, namely in seminars, workshops, and other events, so as to improve the quality of their workforce, which will boost those firms' productivity.

- The Nigerian conglomerate corporations should support upward salary reviews in order to boost employee morale and improve staff productivity, which will lead to increased profitability.

- To raise employee morale, the Nigerian conglomerate firms should make substantial contributions to their pension benefit schemes, which on its part will lead to increased staff productivity and increased profitability.

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# DOPRINOS RAČUNOVODSTVA LJUDSKIH RESURSA PROFITABILNOSTI PRIVREDNIH DRUŠTAVA - KONGLOMERATA KOTIRANIH NA NIGERIJSKOJ BERZI

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Ova studija ima za cilj da proceni uticaj računovodstva ljudskih resursa na profitabilnost privrednih društava - konglomearata kotiranih na Nigerijskoj berzi. Sekundarni podaci koji se koriste u ovoj studiji prikupljeni su iz revidiranih godišnjih izveštaja šest privrednih društava - konglomerata koji se kotiraju na Nigerijskoj berzi u vremenskom periodu 2010-2019. Prikupljeni podaci se analiziraju korišćenjem prilagođene panel regresione tehnike. Dobijeni rezultati pokazuju da troškovi obuke i razvoja zaposlenih, promene u visini zarade zaposlenih i beneficije po okončanju radnog odnosa, utiču značajno pozitivno na profitabilnost privrednih društava - konglomerata u Nigeriji. U studiji se, na osnovu rezultata istraživanja, zaključuje da računovodstvo ljudskih resursa pozitivno doprinosi profitabilnosti privrednih društava - konglomerata u Nigeriji i daju se preporuke nigerijskim privrednim društvima da bi ista trebalo više da ulažu u obuku i razvoj svojih zaposlenih.

**Ključne reči:** računovodstvo ljudskih resursa, obuka i razvoj, zarada, beneficije, profitabilnost