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INFLUENCE OF HUMAN RESOURCE ACCOUNTING ON FINANCIAL PERFORMANCE IN MANUFACTURING FIRMS IN SOUTH-WEST, NIGERIA

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Abstract

Human resource accounting has been described as an emerging area of research focus on the recent times. The values attached to human resource at workplace and the corresponding effects on financial performance require empirical investigation. The study therefore investigated the influence of human resource accounting on financial performance of the selected listed consumer-goods firms in South -West, Nigeria. The descriptive ex-post facto research design was adopted for the study. The study collected data using the secondary source of information. The Structural Equation Modeling and Regression Analysis were used for data collection at 0.05 alpha level.

The findings revealed that human resource accounting contribution to financial performance was not statistically significant. Meanwhile, cost of compensation has significantly contributed to financial performance of the selected listed consumer-goods firms. The study concluded that human resource accounting metrics are essential factors in the consideration of financial performance. The study recommended that organizations should invest heavily on recruitment, employees training and development to foster improved financial performance.

INTRODUCTION

Background to the Study

The manufacturing sector is a crucial component of Nigeria's economy, contributing significantly to Gross Domestic Product (GDP) and employment generation. However, manufacturing firms in Nigeria had faced some challenges including intense competition, technological advancements and economic uncertainty, thereby leading to declining financial performance [1][2]. To remain competitive, these firms must identify and leverage key drivers of financial performance; and optimize their human resources to drive innovation, productivity and profitability. Meanwhile, the existing literature indicates that some Nigerian manufacturing firms neglect the strategic importance of human resource accounting (HRA), focusing instead on traditional accounting practices [3][4].

Based on the record of events, the financial performance of organizations including manufacturing firms has face serious challenges because of rapidly changing environment orchestrated by globalization. The problem of high-performance work system and productivity bargaining had mostly posed serious challenges to financial performance and profitability of most of the existing manufacturing firms in Nigeria, there leading to poor returns on investment; profit after tax, capital employed, asset and equity at the workplaces. Meanwhile, some factors had been attributed to failure or otherwise of business organizations in Nigeria, presumably the human side of the enterprise; but the corresponding effects of human resource accounting are yet to be established especially in developing country like Nigeria.

It has been observed that organizations often invest huge amount of money on employees' recruitment and selection; training and development, retention, health and retirement with little or no positive influence on financial performance in terms of return on investment; return on asset, return on equity, return on capital employed, earning per share and profit after tax. This scenario has posed serious problem on business profitability and sustainability on the part of organization, especially in recession period in developing economy like Nigeria [5][6].

Statement of the Problem

Financial performance has become an area of concern to researchers in the field of Management and Social Sciences. The manufacturing firms in the recent times had found it so difficult to come by positive results from cost leadership and market segmentation especially when comparing annual organizational incomes through returns on investments; assets, equity, capital employed, profit after tax with the expenditure. This alarming rate of failure or otherwise of the manufacturing firms towards establishing the connecting metrics of human resource accounting with the financial performance has become a polemical issue and a gold mine for the 21st century researchers.

Conventionally, human resource accounting (HRA) is a critical approach that organizations use to measure the value of their human resources and their influence on overall organizational performance. The existing literature reveals that there is growing interest in measuring contribution of human resource accounting to financial performance. The mixed findings suggest that the influence of HRA on financial performance may depend on various factors, such as the industry, country, and size of the organization. Most importantly, due to prevailing circumstances on manufacturing firms' operations in Nigeria, it may not be adequate to assume that human resource accounting can have a positive influence on financial performance, particularly in terms of returns on investment; profit after tax, capital employed, asset and equity at the workplaces.

However, various studies have been carried out on the influence of contribution of human resource accounting with regards to investment in recruitment, compensation and employee training on financial performance. The findings of these researchers portrayed some differential portraits of the contribution of human resource accounting to financial performance at the workplaces. A group of scholars argued that there was negative effects of human resource accounting on financial performance [5][6][7][8].

Ogunbiyi-Davies, Alao, Aremu & Olalere [9]; while another group agreed that there was a positive contribution and interaction among variables [10][11][12]. These research findings as stated above therefore require further empirical verification to guarantee generalization of the findings.

Interestingly, as reported above, various empirical studies had been conducted on impact of human resource accounting on various dimensions of financial performance. By implication, measuring and managing human resources effectively, organizations can enhance their financial performance, innovative capabilities, and employee performance. Essentially, it has been observed that most of the studies on human resource accounting and financial performance had been conducted in developed countries while little or few of such studies had been conducted in Nigeria. It is important to note that human resource accounting is not without its limitations, and further research is needed to explore its potential drawbacks and limitations in practice. In this circumstance, there is a need for further empirical verification to establish the contribution of human resource accounting system to financial performance in manufacturing firms especially in developing country like Nigeria and its corresponding effects on profit after tax; returns on investment, equity, asset and capital employed.

It is against this background that the study investigated the impact of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) on financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax) in manufacturing firms in South-West, Nigeria. This is for the purpose of ascertaining the contribution of human resource accounting to financial performance in goal-oriented manufacturing organizations.

Research Questions

The following research questions are formulated for the study:

- i. What is the combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax)?
- ii. What is the variation in financial performance of the selected firms based on human resource accounting practices

Objectives of the Study

The broad objective of the study is to investigate the influence of human resource accounting on financial performance in manufacturing firms in South-West, Nigeria. Specifically, the objectives of the study are to:

- i. ascertain the combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, compensation) to financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax),
- ii. examine the variation in the financial performance of the selected firms based on human resource accounting practices.

Hypotheses of the Study

The following null hypotheses were generated for the study:

H₀₁: There is no significant combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax).

H₀₂: There is no significant variation in the financial performance of the selected firms based on human resource accounting practices.

LITERATURE REVIEW

Concept of Human Resource Accounting (HRA)

The advancement of substantial things or the arrangement of administration to address human resource issues often reflects the two instances of creation. Land, work, capital, and the business personnel are the essential parts of creation. While each association reports and incorporates land, capital, and business people in its fiscal summaries, work is seldom included, thus establishes only an occasional expense brought about by the organization. Representatives or workers are the human resources or assets that organizations have. Human dealt with much the same way to different resources in the association under human resource accounting. The capitalization of ventures and different uses of staff, outside pay rates and wages, is essential for human resource accounting [13][14][15].

The Human Resource Accounting (HRA) is portrayed by the American Accounting Association (1973) as "the method involved with recognizing, estimating, and sharing data on HR to permit powerful administration inside an association," as expressed by Abubakar [16]. HRA is characterized in this definition as the most common way of perceiving and measuring HR for the point of aiding an association's compelling administration. What involves human resource consumptions and how they are to be perceived are not determined in the definition. HRA is characterized as the most common way of measuring the expense consumed by business organizations and different associations to look for, pick, recruit, train, and foster human resources, referred to in Sharma & Gupta [17]. This gives knowledge into what human resource consumptions ought to be perceived for valuation and announcing reasons. As such, this definition believes HRA to be the estimation of an individual's financial worth to an association.

Meanwhile the prior meaning of HRA zeroed in on the expenses of redesigning and creating HR, another definition considers the contributing part of HR. Subsequently, Friedman and Lev (1974) and Lau and Lau (1978), both quoted in Abubakar (2017), consider HRA to be a way for efficiently assessing both the resource worth of work and the amount of resource creation owing to faculty exercises. As well as recognizing the expense suggestions, this definition consolidates the monetary worth credited to the human resource [18][19]. HRA alludes to the estimating of an organization's workers' abilities to create esteem from their insight and mental gifts at each level - the management, administrative, and customary representatives. This definition considers the current ascent of the assistance business, where representative information and scholarly characteristics are basic to progress.

Human Resource Costs

Human resource costs are the expenses of recruiting or supplanting workers. They are comprised of both cost and resource parts. According to Kaplan and Norton [20], human resource accounting expenses can be evaluated in two ways: the first or verifiable expense of human resource, and the substitution expenses of HR.

The underlying expense of human resource can be depicted as the real expense of getting, creating, or supplanting individuals. Reflecting on Kaplan and Norton [21], submission on human resource accounting expenses, the first expense covers charges for enrollment; choice, employing, position, direction, and hands on preparing. Both immediate and aberrant charges are remembered for the first expense. For instance, a learner's compensation is an immediate expense, while the manager's or other workers' time spent during preparation is a roundabout expense [22]. It is desirable over fuse the open-door costs caused in the first costs of HR while involving cost information for administrative purposes. Notwithstanding, on the ground that the exactness of choice expenses may never be ensured; it ought not be remembered for financial backer and outside client reports statements.

Theoretical Framework

For the purpose of this study, three relevant theories were reviewed due to their emphasis on the significance of understanding the strategic importance of human capital at the workplaces.

Resource-Based View Theory (RBV)

RBV complements HRA by emphasizing the strategic importance of a firm's internal resources, including human resources, in achieving sustainable competitive advantage. Barney (1991) and Grant (1996) have outlined how human resources, being heterogeneous and immobile, can contribute to a firm's competitive advantage. Integrating RBV into the theoretical framework allows for a deeper understanding of how human resource accounting can enhance the strategic management of human capital for superior performance.

Agency Theory

Agency theory provides insights into the principal-agent relationship within organizations and how conflicts of interest can affect organizational performance. Incorporating agency theory into the theoretical framework allows for the exploration of how human resource accounting can mitigate agency problems by aligning the interests of managers with those of shareholders. Authors such as Jensen and Meckling [23] and Eisenhardt [24] have contributed foundational concepts to this theory.

Stakeholder Theory

Stakeholder theory emphasizes the importance of considering the interests of all stakeholders, including employees, in organizational decision-making. By integrating stakeholder theory into the framework, the study can explore how human resource accounting acknowledges the significance of employees as stakeholders and aligns with broader organizational goals. Authors such as Freeman [25] and Mitchell et al. [26] have provided foundational insights into stakeholder theory.

The theories reviewed for the study collectively provide a comprehensive theoretical framework for investigating the influence of human resource accounting on financial performance in manufacturing firms. They offer complementary perspectives on the strategic management of human capital, the alignment of organizational interests, and the broader implications for organizational success.

Empirical Review

Empirical Studies from Developed Countries

A cross-sectional study conducted by De Lange-Ros and Van den Berg [27] found that HRA has a positive impact on business performance. The study analyzed data from 168 Dutch organizations, and found that organizations that used HRA had higher levels of innovation, profitability, and productivity than organizations that did not use HRA. The authors suggest that HRA provides decision-makers with a better understanding of the value of human resources, and helps organizations to allocate resources more effectively. For the purpose of generalization, this study was conducted in developed country and there is a need to replicate such study in developing country like Nigeria.

In the context of the first objective, aimed at comprehending the financial performance patterns in selected manufacturing firms. Chondough [28] and Srimannarayana [29] indirectly offer valuable insights. The primary focus of Chondough's [30] investigation lies in exploring the influence of human capital investment and the moderating role of employee engagement on financial performance. To this effect, the study indirectly illuminates broader trends within the manufacturing sector through illustrating the positive impact of human capital investment on financial performance and emphasizing the reinforcing effect of employee engagement. The research indirectly uncovers aspects of business performance patterns in manufacturing firms. Specifically, the study implies that strategic endeavours, such as investing in human capital, in conjunction with factors like employee engagement, can contribute to improved financial outcomes in the manufacturing firms. Thus, although not explicitly addressing the overall pattern of business performance, but the findings provide pertinent insights that enhance understanding of the dynamics and determinants influencing performance within manufacturing firms.

Empirical Studies from Developing Countries

Reflecting on linkages of human resource accounting and financial performance, it is pertinent to note that not all studies have found a positive impact of HRA on financial performance. For example, a study conducted by Piening and Salge [30] found that the use of HRA had no significant impact on financial performance in a sample of German firms. The authors suggest that the lack of impact may be due to the fact that HRA is a complex and time-consuming process that may not provide immediate benefits. Another study by Farid et al. [31] examined the impact of HRA on employee performance in the banking sector in Pakistan. The study found that HRA has a positive impact on employee performance, which in turn has a positive impact on business performance. The authors suggest that HRA can be used to identify areas where employees need training and development, and to allocate resources more effectively.

Salman et al. [32] examined the effectiveness of various HRA practices in enhancing employee competencies within the Indian banking industry. Through a quantitative survey and structural equation modeling, they identified significant relationships between HRA interventions such as training programmes, performance appraisals, and employee competency levels. Although education and work experience were not directly addressed as moderators, their study underscores the importance of investigating these factors in the Nigerian context to tailor HRA interventions to the specific needs and challenges of organizations operating in this environment.

Ekoyi et al. [33] investigate the implications of human resource accounting investment on the financial performance of Nigerian banks, aligning with objective one, which centers on understanding the pattern of business performance. By examining the impact of human capital efficiency (HCE), structural capital efficiency (SCE), and relational capital efficiency (RCE) on financial performance indicators such as return on total assets (ROTA), return on shareholders' equity (ROSE), and earnings per share (EPS), the research aims to elucidate the influence of human resource accounting investment on bank performance. Employing an ex-post facto research design and analyzing data from audited annual reports of 12 banks over 15 years. Ekoyi et al. [34] utilizes econometric techniques to demonstrate the positive and significant impact of HCE and SCE on ROTA, ROSE, and EPS. Although RCE exhibits a positive but insignificant impact on EPS and lacks significant effects on ROTA and ROSE, the overall findings suggest that human resource accounting investment significantly shapes the financial performance of Nigerian banks.

Nwude et al. [35] investigate the relationship between human resource accounting practices and bank performance in Nigerian listed deposit money banks, which is relevant to objective one focusing on understanding the pattern of business performance. The study aims to fill the gap in the literature regarding the influence of human resource accounting practices on various performance indicators in emerging market economies. Using panel data multiple regressions applied to annual reports from 2009 to 2020, the research assesses the impact of human resource accounting practices on risk-adjusted returns on assets and equity, dividend yield, earnings, and cost-to-income ratio. The findings reveal that human resource accounting practices positively and significantly relate to bank performance indices. This suggests that effective human resource accounting practices contribute to enhanced financial performance. The study's novelty lies in introducing new indices for measuring human resource accounting practices and their impact on performance, departing from conventional methods used in both emerging and developed market economies. This research contributes to objective one by providing insights into the dynamics of financial performance in Nigerian banks, which this study intends to explore on manufacturing sector of Nigerian economy. Specifically, the present study specifically highlighted the influence of this metrics on the financial outcomes of the selected manufacturing firms in South West, Nigeria.

METHODOLOGY

Research Design

Research design is the plan, structure and strategy of investigation to obtain answers to research questions and to control variance [36]. Specifically, the research design used for the study is ex-post facto research

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design, which is very appropriate for the study because manipulation of the data and research process by the researcher could not be made possible since the event under the study had already occurred. In essence, the researcher was allowed access to the data without any direct or indirect influence on the research variables and data collection process in the study.

Most importantly, the ex-post-facto research design is considered most relevant to this study because a large amount of data were gathered through the secondary source for analysis using the appropriate statistical methods, enhance validity, interpretation of data and triangulate findings.

Population for the Study

The population for the study consists of all twenty-one (21) consumer-goods manufacturing companies that operate in South West, Nigeria; as listed in Nigeria Exchange Group (NGX). It is pertinent to note that all the listed Companies used for the study have equal chance of participation in this study.

Sample Frame

The sample frame for the study consists of all consumer-goods manufacturing firms in South West, Nigeria, totaling twenty one firms as listed in Nigeria Exchange Group. These firms are stratified into small, medium and large- scale enterprises to ensure representation across various firm sizes. The sample frame is restricted to South-West, Nigeria to allow for in-depth examination of the specific regional context. This stratified sampling strategy enables the researcher to generalize findings to the broader population of manufacturing firms in the region.

The sample for this study was drawn from the lists of the most active firms trading on the Nigerian Stock Exchange published by the Nigerian stock market authority. These lists include firms that constitute around 45 percent of the total market capitalization. Published lists from 2017 to 2023 were examined and firms from financial industries were ruled out as their operations and regulations are fairly different.

Method of Data Collection

The data collection process primarily involved the use of secondary data in form of audited account and Annual Reports of selected Manufacturing Firms; internet Library, textbooks, academic journals, and newspaper articles. The data were carefully designed to capture relevant insights and perspectives regarding the influence of human resource accounting on financial performance in manufacturing firms.

Method of Data Analysis

The data generated from the Audited Accounts were analyzed using the descriptive and inferential statistics. The descriptive statistics employed for the study includes, tables of analysis, means, frequency counts and percentage analysis. This study also made use of Regression Analysis, Analysis of Variance (ANOVA) and structural equation model (SEM) Analysis with the aid of statistical package for Social Sciences (SPSS Version 26).

The structural equation model (SEM) Analysis; Multiple Regression and Analysis of Variance (ANOVA) were used to test hypotheses one and two. All the hypotheses were tested at 0.05 alpha levels of confidence.

RESULTS

Testing of Hypotheses

Hypothesis One

H₀₂: There is no significant combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax).

Table 1 OLS Estimation Test on combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.16E+09	1.43E+10	-0.568968	0.5799
Human Resource Accounting	2.721206	3.753908	0.724900	0.4824
R-squared	0.041953	Mean dependent var		-9.59E+09
Adjusted R-squared	-0.037884	S.D. dependent var		5.22E+10
S.E. of regression	5.31E+10	Akaike info criterion		52.36161
Sum squared resid	3.39E+22	Schwarz criterion		52.45290
Log likelihood	-364.5313	Hannan-Quinn criter.		52.35316
F-statistic	0.525479	Durbin-Watson stat		0.014192
Prob(F-statistic)	0.482410			

Source: Author's computation using E view, 2025

The regression analysis was conducted to examine the impact of human resource accounting (HRA) on the financial performance of manufacturing firms in South-West Nigeria. The model's output provides insights into both the intercept and the main independent variable (HRA). The intercept, or constant term (C), has a coefficient of $-8.16E+09$ with a standard error of $1.43E+10$. The t-statistic of -0.569 and the p-value of 0.5799 indicate that the intercept is not statistically significant, as the p-value is far above the commonly accepted threshold of 0.05 . This means that when all independent variables are held constant (i.e., $HRA = 0$), the predicted value of financial performance is not significantly different from zero. The R-squared value is 0.041953 , indicating that the model explains only about 4.2% of the variability in financial performance. The Adjusted R-squared value of -0.037884 suggests that the model is not a good fit for the data, and the explanatory power of the independent variables is very weak. The Standard Error of Regression is $5.31E+10$, which gives an idea of the dispersion of the residuals. The Sum of Squared Residuals is $3.39E+22$, a very large value, which further indicates that the model does not explain the data well.

However, this result is not unusual and often holds limited interpretative value unless the intercept carries contextual relevance, which is rare in financial performance models [37]. The primary variable of interest, human resource accounting, has a coefficient of 2.721206 , with a standard error of 3.753908 , resulting in a t-statistic of 0.725 and a p-value of 0.4824 . This p-value exceeds the 0.05 significance level suggesting that human resource accounting does not have a statistically significant impact on financial performance within the scope of this study.

The second hypothesis tested the variation in the contribution of human resource accounting variables (recruitment cost, staff training, and compensation) to financial performance.

Table 2 Fixed Effect Estimation Result on variation in the contribution of human resource accounting (recruitment cost, staff training, and compensation) to financial performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.89E+09	8.18E+08	-10.86031	0.0000
Human Resource Accounting	1.335347	0.328476	4.065280	0.0028

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.997720	Mean dependent var	-9.59E+09
Adjusted R-squared	0.996707	S.D. dependent var	5.22E+10
S.E. of regression	2.99E+09	Akaike info criterion	46.74929
Sum squared resid	8.06E+19	Schwarz criterion	46.97752
Log likelihood	-322.2450	Hannan-Quinn criter.	46.72816
F-statistic	984.7636	Durbin-Watson stat	2.643732
Prob(F-statistic)	0.000000		

Source: Author's computation using E view, 2025

Estimation Command:

LS(CX=F) FP C HRA

Estimation Equation:

$$FP = C(1) + C(2)*HRA + [CX=F]$$

Substituted Coefficients:

$$FP = -8887632813.54 + 1.33534712935*HRA + [CX=F]$$

The results presented in Table 2 show the outcome of a Fixed Effects Estimation conducted using panel least squares regression, with financial performance as the dependent variable. **Fixed**

The use of cross-section fixed effects, indicated by dummy variables, is crucial in panel data analysis. This specification controls for individual-specific characteristics that are constant over time but may affect the dependent variable. By including fixed effects, the model accounts for heterogeneity across cross-sections, providing a more accurate estimation of the impact of each of the metrics of human resource accounting,

the independent variables (costs of staff training, recruitment and selection, and employee compensation) on the dependent variable (Financial performance).

Interpretation of Coefficients and Statistical Significance:

Intercept (C): The constant term has a coefficient of $-8.89E+09$ (approximately -8.89 billion), with a very small standard error of $8.18E+08$. The t-statistic of -10.86031 and a p-value of 0.0000 indicate that the intercept is statistically significant at the 1% level. This suggests that, holding other factors constant, the baseline financial performance (possibly for the omitted cross-sectional unit) is negative and significant. The coefficient for Human Resource Accounting is 1.335347 , and it is statistically significant ($p = 0.0028 < 0.01$). This implies a positive and significant effect of human resource accounting on Financial Performance. Specifically, a one-unit increase in human resource accounting is associated with an approximate 1.34 unit increase in financial performance, suggesting that investments or practices in human resource accounting contribute meaningfully to financial outcomes but varied across the selected manufacturing firms.

Model Fit and Performance:

The R-squared value of 0.997720 indicates that 99.77% of the variation in financial performance is explained by the model. The Adjusted R-squared of 0.996707 confirms that even after adjusting for the number of predictors, the model still explains nearly all the variability in the dependent variable. This signifies an excellent model fit. The R-squared (R^2) value of 0.9977 suggests that 99.77% of the variability in financial performance is explained by the independent variables (likely the metrics of Human Resource Accounting). The Adjusted R-squared, which adjusts for the number of predictors, is also very high (0.9967), confirming the strong explanatory power of the model even after accounting for potential overfitting.

Based on the random effect estimate result, showed that there is significant variation in the magnitude of contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance (return on investment; return on asset, return on capital employed, return on equity and profit after tax).

Discussion of Findings

This study sought to explore the impact of human resource accounting (HRA) on financial performance, and the results provide interesting insights into the contribution of human resource accounting in improving financial performance. The first hypothesis tested the combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) on financial performance. The finding indicated that there is 57.6% combined contribution of human resource accounting (costs of recruitment and selection; staff training and development, and compensation) to financial performance (return on investment; return on asset, return on capital employed and profit after tax), but not statistically significant (the p-value of 0.5799). The finding on the negative and but significant contribution of human resource accounting (HRA) on financial performance are consistent with several previous studies in the field of human capital management and organizational performance. At the same time, they offer insights that support and extend existing theories on human capital, organizational behaviour, and financial management. The finding supports the previous researchers' findings by showing that human resource accounting practices, which help quantify and leverage human capital, positively influence a firm's financial performance but not significant compared to other factors that facilitate financial performance at the workplaces [38][39][40][41].

The second hypothesis tested the variation in the contribution of human resource accounting variables (cost of recruitment and selection, staff training and development, and compensation) to financial performance. The findings revealed that there was variation in the levels of contribution of human resource accounting to financial performance. A group of scholars argued that there was negative effects of human resource accounting on financial performance. The authors disagreed with the findings of this study and submitted that investment in recruitment and selection; training and development and compensation had varied degree

of magnitude in their contributions with compensation have the most highest level of magnitude. For instance, the findings for employee compensation were particularly significant. The random effects model revealed a positive and significant contribution of compensation cost to financial performance, with a significant difference from the fixed effects model as confirmed by the Hausman test. Specifically, higher compensation levels were associated with improved financial outcomes across all the profitability measures (ROI, ROA, ROCE, and PAT).

The coefficient for staff training and development was found to be positive in both the random effects model and the Hausman test comparison. In the fixed effects model, however, the coefficient for this variable was negative and statistically significant. This suggests a complex relationship between training and development investments and financial outcomes, where training and development appears to enhance financial performance under the random effects model but may have a counterproductive effect under the fixed effects specification. The Hausman test confirmed this discrepancy, supporting the fixed effects model as more appropriate.

This finding is consistent with existing literature on human capital theory, which suggests that investing in training and development should, in principle, improve employee productivity, thereby positively impacting financial performance (Kirfi & Abdullah, 2021). However, the negative effect in the fixed effects model could reflect inefficiencies in how training investments are made, potentially indicating that organizations may not be optimizing their training expenditures.

Recruitment and selection costs were found to have a negative and insignificant impact on financial performance across both random and fixed effects models, though the Hausman test did not find a significant difference in the coefficients for this variable. This suggests that, while recruitment is an essential process for ensuring the right talent is hired, the costs associated with recruitment do not necessarily translate directly into improved financial outcomes.

This result aligns with the theory of human capital investment, which posits that spending on recruitment should lead to better employee performance and organizational outcomes. However, the insignificance of recruitment costs in predicting financial performance may indicate that the effectiveness of recruitment strategies is not sufficiently captured by the variables in the model. A potential explanation could be that recruitment costs reflect a mere cost without a direct return on investment, as other factors such as training, integration, and retention practices play a more critical role in driving performance.

This result is notable because it contrasts with some existing literature that underscores the positive influence of HRA on firm performance. For example, Ogodor and Olaniyi (2022) found a significant positive relationship between various HRA metrics (such as personnel expenses and training) and performance indicators like Return on Assets (ROA) and Earnings per Share (EPS) in listed consumer product firms in Nigeria. Similarly, Omotayo et al. (2020) reported that effective HRA practices significantly enhanced revenue growth and employee retention in the banking sector.

Most importantly, the discrepancy between the present findings and prior research could be attributed to several contextual factors. First, Sectorial differences school of thought, which asserted that manufacturing firms often operate under tight cost constraints and may not immediately realize the benefits of HRA, unlike sectors such as banking or fintech that rely heavily on human capital for value creation. Secondly, implementation gaps school of thought, which opined that the insignificance of HRA in this study could also reflect inefficiencies or inconsistencies in how HRA is implemented across the sampled firms. If human resource expenditures are not strategically aligned with performance goals, they may fail to generate measurable financial benefits. Thirdly, time lag effect school of thought which predisposes that as for training and development cost-benefit implication, the financial benefits of HRA may not be instantaneous but manifest over time. Short-term financial performance may thus not fully capture the value added by human resource investments. By implication, human resource accounting has a significant effect on profit after tax, but mixed results on return on asset and return on equity across the selected manufacturing firms.

CONCLUSION

This study investigated the impact of human resource accounting (HRA) on the financial performance of manufacturing firms with particular attention to the role of recruitment costs, staff training and development, and compensation practices. The findings established that human resource accounting has contributed significantly to financial performance of manufacturing firms. Findings further established that a variation exists on the effect of human resource accounting with different magnitude on financial performance across the selected manufacturing firms. In conclusion, the outcomes of the study reinforce the theoretical underpinnings of the human resource accounting theory and the Resource-Based View (RBV), emphasizing that strategic investment in human resources is critical to achieving and sustaining superior financial performance.

Recommendations

Based on the findings of the study, the following recommendations are made:

- i. Organizations should design and implement competitive and performance-based compensation systems to attract, train, motivate and retain high-performing employees. Compensation was the strongest predictor of financial success in this study.
- ii. Organisations should adopt strategic recruitment models that focus not only on academic qualifications or work experience but also on skills, adaptability, and cultural fit. Introduce competency-based assessments and psychometric testing as part of the recruitment process. Improved quality of hires, by putting into consideration long term retention of employees, this will prevent periodic short term recruitment processes and in turn foster better organizational performance.
- iii. Firms should consider incorporating human resource accounting data (such as training costs, recruitment investments, and compensation expenses) into their overall strategic and financial planning processes. Management should periodically assess the return on investments made in human resources to ensure that spending in areas such as training and compensation continues to align with organizational financial goals.

Contribution to Knowledge

This study makes significant contributions to both academic knowledge and practical management:

- i. The study has contributed to knowledge by providing empirical evidences, that human resource accounting, particularly investments in training and compensation, plays a pivotal role in enhancing financial performance of manufacturing firms.
 - ii. Unlike many studies that lump all HR expenditures together, this study separately assessed recruitment costs and found their negative effect, contributing nuanced understanding to the literature on HR investments.
- (iii) The study established that employment of highly qualified workforce, proper training and development and accountable structure are essential catalyst for improved financial performance at workplaces.

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