

The Nexus between Human Capital Cost and Financial Performance of Nigerian Commercial Banks

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Abstract: *This study investigates the impact of human capital cost on the financial performance of listed commercial banks in Nigeria from 2009 to 2023, employing an ex-post factor research design. The population comprises fifteen listed commercial banks in Nigeria, with data collected from audited financial reports and the Nigeria Stock Exchange fact book. The study employs descriptive statistics and multiple regression analyses. Findings reveal significant variability in training costs and financial performance (ROA) among Nigerian commercial banks, indicating diverse human capital investment strategies and effectiveness. Health safety costs demonstrate a positive and statistically significant relationship with ROA, suggesting that investments in employee well-being contribute to improved financial performance. Conversely, no statistically significant relationship is found between training costs and ROA, implying that current training investments may not effectively translate into financial performance improvements. The study's poor overall model fit, evidenced by a negative adjusted R-squared, indicates that factors beyond training and health-safety costs likely influence bank performance. The uneven distribution of financial performance among banks suggests that high-performing institutions maybe driving overall industry performance. Recommendations include increasing investments in employee health and safety programs, reassessing training strategies to improve effectiveness, developing targeted human capital management approaches, and investigating additional factors influencing financial performance such as organizational culture, management practices, and technological investments.*

Keywords: *Commercial banks, Financial performance, Health/Safety costs Human capital cost, Training costs,*

INTRODUCTION

The Nigerian banking sector thrives in a dynamic and competitive environment. Commercial banks constantly grapple with balancing operational efficiency and maximizing financial performance. In this pursuit, human capital—the knowledge, skills, and experience of their workforce—emerges as a critical asset. However, the cost associated with this asset, human capital cost (HCC), presents a complex interplay with a bank's financial health. However, the early work of Schultz (1961) and Becker (1964) on human capital has laid a robust foundation for understanding the complexities of valuing human capital in organizations. Schultz emphasized the importance of investing

in human capital, recognizing the direct correlation between work forces skills and economic growth. Becker expanded on this by framing human capital as an investment in education and training, underscoring its critical role in organizational performance and competitiveness. Human capital costs within organizations have emerged as pivotal in shaping success and maintaining a competitive edge. Investments in training, development, talent acquisition, and retention are strategic imperatives for organizations, significantly impacting overall performance (Becker, 1993). The broader business environment, marked by rapid technological advancements and global competition, necessitates continuous investments in human capital to ensure agility and resilience (Schultz, 1961). This is particularly vital in industries where knowledge and expertise are key differentiators, such as technology, finance, and professional services.

Financial performance, encompassing various metrics like revenue growth, net income, and return on investment, is crucial for stakeholders and guides strategic decision-making (Brigham & Houston, 2016). In the financial industry, human capital costs are especially critical. Banks rely heavily on the expertise of their employees to provide financial services, manage risks, and navigate complex regulatory environments (Becker & Gerhart, 1996). The role of skilled bankers in client relationships, compliance, and financial innovation highlights the importance of human capital costs in commercial banks. The Human Capital Index by the World Bank (2020) reflects global efforts to measure and benchmark human capital, including education and health outcomes. Understanding the evolution of human capital costing and leveraging tools like the Human Capital Index are crucial for strategic planning and decision-making in organizations, including commercial banks. In the dynamic financial sector, the relationship between human capital costs and financial performance is significant. In Nigerian commercial banks, this relationship reflects broader industry challenges and opportunities. Human capital investments in recruitment, development, and retention are essential for adapting to global trends and technological advancements (Adebayo & Amah, 2017).

Despite the acknowledged importance of human capital, there is a gap in scholarly work specifically examining human capital cost, particularly integrating training and health/safety costs in a single study. This study aims to bridge this gap by investigating the relationship between human capital cost and financial performance of commercial banks in Nigeria. Human capital cost, encompassing recruitment, training, and compensation, directly impacts organizational success. For Nigerian commercial banks, the benefits of human capital investment include enhanced productivity, improved customer service, and overall efficiency (Jones, 2018). However, challenges such as high turnover rates, the need for continuous skill development, and regulatory compliance costs persist (Okafor, 2020; Umar, 2019; Adewumi, 2021). Balancing these costs with competitive compensation remains a dilemma for human resource managers. Additionally, addressing diversity and inclusion incurs additional costs but contributes to long-term success (Ezenwa, 2022). This study seeks to provide a comprehensive analysis of human capital cost and its impact on financial performance in Nigerian commercial banks, addressing existing literature gaps and offering theoretical and practical insights for sustainable growth.

CONCEPTUAL FRAMEWORK

This study investigates the relationship between human capital cost and financial performance, with human capital cost serving as the predictor (independent) variable and financial performance as the criterion (dependent) variable as depicted in Figure 1

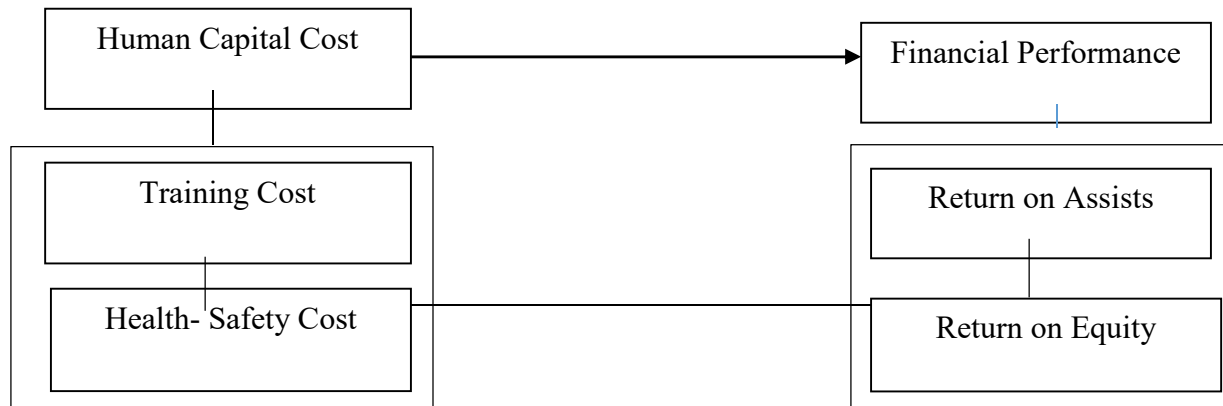


Figure 1: Conceptual Framework of the Relationship between Human Capital Cost and Financial Performance

Source: Research Desk, 2024; Dimensions of Human Capital Cost adapted from Okafor (2020) and Adewumi (2021), with measures of financial performance sourced from Jones (2018) and Umar (2019).

THEORETICAL FOUNDATION

The theories underpinning the relationship between human capital cost and financial performance are the Human Capital Theory and the Resource-Based View (RBV) Theory. These theories have been frequently utilized by scholars in related studies.

HUMAN CAPITAL THEORY

Human Capital Theory, developed in the mid-20th century by economist Gary Becker, extends the concept of capital to include the knowledge, skills, and capabilities embedded in individuals (Becker, 1964). This theory posits that investments in education and training yield economic returns through increased productivity, innovation, and economic growth. It views human capital as an intangible asset that appreciates overtime through learning and experience, with higher education and skills leading to higher wages and better career prospects. The theory emphasizes the role of education and training in enhancing productivity and employability, advocating for continuous investment to adapt to changing economic conditions and technological advancements (Schultz, 1961). It has influenced

labor market policies promoting education and skills development to improve individual and societal well-being. However, the theory has faced critiques for over simplifying labor market complexities and ignoring social and institutional factors influencing human capital formation. Extensions of the theory include non-formal learning, health, and other dimensions of human development (Psacharopoulos, 1994).

For business organizations, Human Capital Theory highlights the pivotal role of human resources in driving productivity and organizational success. It underscores the importance of continuous learning and skill development to adapt to market dynamics and technological advancements (Strober, 2001). Organizations that align their human resource practices with the principles of human capital theory tend to attract, develop, and retain high-quality talent, enhancing overall business performance through improved operational efficiency, innovation, and customer satisfaction (Dessler, 2005). In the context of Nigerian commercial banks, Human Capital Theory is instrumental in guiding strategies for recruitment, training, and talent retention. Effective management of human capital costs, including recruitment, training, and compensation, is critical for maintaining financial sustainability and improving operational efficiency and financial performance.

RESOURCE-BASED VIEW THEORY

The Resource – Based View (RBV) theory, foundational to Hunt's (1995) resource – advantage theory, asserts that a firm's competitive advantage and performance are derived from its unique resources and capabilities (Barney, 1991). According to RBV, resources must be valuable, rare, inimitable, and non-substitutable (VRIN criteria) to generate sustained competitive advantage. In the context of commercial banks, human capital is recognized as a critical resource. Investments in recruiting, training, and retaining skilled employees become strategic aspects of resource management. Banks that effectively allocate resources to enhance the knowledge, skills, and capabilities of their work force align with the RBV perspective, aiming to create a distinctive advantage in the market place. RBV categorizes resources into tangible and intangible entities. Tangible resources include financial, physical, and legal resources, while intangible resources encompass human, organizational, informational, and relational resources (Griffith & Yalcinkaya, 2010). Human resources, considered the most crucial, are action-oriented and drive the usage of other resources. In Nigerian commercial banks, effective utilization of human capital becomes a source of differentiation in a competitive market. Banks that invest in developing knowledgeable and skilled work force possess a source that is both valuable and rare, contributing to their competitive position. Judicious management of human capital costs, viewed through the lens of RBV, is a strategic imperative that positively impacts financial performance.

EMPIRICAL REVIEW

Olatunji and Ajayi (2024) investigated the role of technological adoption in shaping human capital investment strategies and financial performance outcomes in Nigerian commercial banks. The study found that banks leveraging technology to enhance employee skills through digital learning platforms and automation tools achieved greater

operational efficiency and competitive advantage, resulting in improved financial performance metrics. Jack, John and Amadi (2024) investigated human resource investment and corporate profitability: Focus on listed pharmaceutical firms in Nigeria. The study indicated that there is a significant effect of human resource investment and corporate profitability of listed pharmaceutical firms in Nigeria from 2011 to 2020. Adeyemi and Okafor (2023) investigated the impact of human capital investment on the financial performance of commercial banks in Nigeria. The findings revealed a positive and significant relationship between investments in employee education, training, and development, and various financial performance indicators such as return on assets (ROA) and return on equity (ROE).

Mbah, Ijeoma, and Oche (2021) investigated human capital investment's effects on Nigerian banks' performance, confirming positive impacts. **Imeokparia and Oyinloye (2020)** investigated the impact of human capital investment on Nigerian banks' performance using multiple regression analysis and panel research design. They analyzed secondary data from 2010-2019 for ten listed banks, finding a positive and significant impact on Return on Assets (ROA) but a negative and insignificant relationship with Return on Equity (ROE) (p-values: 0.0417 & 0.0000). **Joe, Churchill and Etim (2020)** examined employee costs and performance in Nigerian commercial banks using ex-post facto research design and panel data. They found that employee cost positively and significantly affects earnings per share, emphasizing the importance of measuring human asset investments for better organizational effectiveness. **Obuah, Wali, and Turakpe (2020)** studied staff costs and profitability in Nigeria's soil and gas sector, using regression analysis to reveal that salaries and training costs positively impact profit margins, while medical expenses have a negative effect. **Obuah, Wali, and Turakpe (2020)** investigated staff costs and profitability in Nigeria's soil and gas sector, showing that training costs positively impact profit margins.

Onuorah, Okeke, and Ikechukwu (2019) explored various compensation types' impacts on employee performance in Nigeria, using Z-tests. They found no significant negative effect of compensation types on employee performance. **Onuoha, Okeke, and Ikechukwu (2019)** investigated performance-based compensation's effect on employee performance in Nigeria using a Z-test, finding no negative impact. **Obiazonwa and Adesina (2018)** assessed human capital expenditure's impact on financial performance in Nigerian manufacturing companies. Using questionnaires and linear regressions, they identified significant relationships between human capital expenditure and both return on equity and return on assets. **Adams and Oche (2018)** studied human capital development and organizational performance in Nigeria, finding positive associations with performance metrics. **Eze, Ugwuanyi, and Nwafor (2018)** explored human capital's impact on organizational performance in Nigerian firms, finding positive relationships. **Ojeleye (2017)** explored remuneration's impact on performance, highlighting a strong positive relationship. **Mohammad, Mahi, and Nazamul (2017)** studied human resource development's impact on Bangladesh's banking sector, finding a significant relationship with financial performance.

Omodero, Alphaeus, and Ihendinihu (2016) investigated human resource costs' impact on Nigerian firms' financial performance, finding a positive effect on profit after tax but no significant effect on turnover. **Christian and Omodero (2016)** examined the growth of human capital and its impact on Nigerian banks' financial performance. They found no significant correlation and recommended more focus on human capital growth. **Bullen and Eyer (2016)** studied the relationship between Human Resource Accounting Information (HRAI) and company performance in Brazil, showing that larger firms with higher market value disclose more HRA information. **Turner (2016)** investigated human resource accounting's effectiveness on organizational growth in England using primary data. Results showed a significant effect on growth, recommending better record-keeping for increased performance. **Webourne (2016)** examined human resource accounting's effect on Nigerian banks' performance, finding a significant impact and recommending regular performance appraisals of employees. **Etebu (2016)** studied financial compensation management's role in improving performance in Bayelsa State, finding significant impact and alignment with efforts.

Adebawojo and Adebawo (2015) explored human asset accounting's effect on Nigerian business organization using a Likert scale questionnaire. Their findings confirmed a significant effect on bank performance. **Zahraetal. (2015)** focused on salary, training, and motivation's influence on job performance in Pakistan, finding positive relationships, with salary showing the strongest correlation. **Obi (2015)** examined the influence of human capital on financial performance in Nigerian firms, revealing significant positive effects. **Udo (2015)** explored the impact of human capital on organizational efficiency in Nigerian firms, finding significant positive effects. **Nwafor (2016)** analyzed human capital investment's role in Nigerian banking sector performance, confirming significant positive impacts. **Ifurueze, Odesa, and Ifurueze (2014)** investigated human resource costs' causal link to organizational performance in Nigeria, finding a positive relationship between human resource costs and profitability. **Ifurueze, Odesa, and Ifurueze (2014)** found a significant positive relationship between human resource costs and firm profitability in Nigeria. **Ogunniyi & Adebayo (2014)** studied human capital's impact on the performance of manufacturing firms in Nigeria using questionnaires and linear regressions, revealing significant effects.

Maimuna and Rashad (2013) analyzed the positive association between human capital expenditures and profits, emphasizing the benefits of training investments which resulted in significant productivity improvements. **Micha, Ofurun, and Ihendinihu (2012)** analyzed human resource accounting's effect on ROA in Nigeria, concluding that such accounting has a significant impact, suggesting human capital costs should be capitalized rather than expensed. **Bassey and Tapang (2012)** explored human resources costs' impact on corporate productivity in Nigeria, confirming a positive and significant relationship. **Salman & Tayib (2013)** explored human capital spending's effect on financial performance in Nigeria, demonstrating a positive impact on efficiency. **Yusuf (2011)** investigated human capital investment's impact on Nigerian banks, revealing significant associations between human capital investment and certain performance metrics, though some relationships were not significant. **Khan, Farooq, and Khan (2010)** studied human resource accounting's effect on organizational growth in Germany, finding

no significant impact and recommending adoption of human resource accounting for better growth. **Okwy & Christopher (2010)** analyzed human capital's importance to financial performance using cost models and economic approaches, concluding its significant role in future benefits. **AlMamun (2009)** investigated the relationship between Human Resource Accounting Information (HRAI) and company size in UAE. Results indicated that larger companies disclose more HRA information, with financial companies disclosing more than non-financial ones. **Shrader & Siegal (2007)** argued that human capital, like other assets, should be treated as such to generate future benefits. **Rayton (2003)** examined the performance elasticity of employee compensation in U.S. manufacturing firms, finding a significant link between high performance and the alignment of employee compensation.

METHODOLOGY

The study adopts an ex-post facto research design to examine the effect of human capital cost on the financial performance of listed commercial banks in Nigeria, spanning from 2009 to 2023. This design is chosen to establish the relationship between human capital cost and financial performance over a fifteen-year period and to investigate causal relationships between relevant variables based on historical annual financial reports. The population consists of the fifteen listed commercial banks in Nigeria based on the Nigeria Exchange Report 2023. The sampling frame includes all deposit money banks in Nigeria as of June 30, 2023, sourced from the Nigeria Exchange Fact sheet 2023. Data is collected using a structured data collection matrix form, extracting secondary data from annual audited financial reports and the Nigeria Stock Exchange fact book for the years 2009 to 2023.

Secondary data sources from authorized government agencies such as the Central Bank of Nigeria and the Nigeria Stock Exchange ensure validity and reliability. Reliability tests include auto correlation, normality, Durbin-Watson, Correlaogram, and Breusch-Pagentests, all within accepted thresholds. Descriptive statistics and multiple regression analyses are employed to analyze data. Assumptions of normality, linearity, homoscedasticity, non-multi collinearity, and non-serial correlation are checked using relevant statistics. Tests for heteroscedasticity, autocorrelation, and collinearity are performed, and the Newey-West method is used to address auto correlation and heteroscedasticity concerns. The functional relationship between human capital cost and financial performance of listed commercial banks in Nigeria is represented as follows:

$$ROA = f(\text{Training Cost, Health} - \text{Safety Cost})$$

Econometrically it is specified as follows:

$$ROA = \alpha_0 + \beta_1 TRC + \beta_2 HSC + \mu$$

Where

ROA= Return on Assets (proxy for financial performance)

TRC= Training Cost

HSC= Health- Safety Cost

α_0 = Intercept

$\beta_1 - \beta_2$ = Coefficient of regression

μ = Error term

The coefficients of regression, β_1 and β_2 elucidate how a unit change in the independent variables (Training Cost, and Health-Safety Cost) impacts the dependent variable (Return on Assets). The incorporation of the error term, μ accommodates other influential factors that may affect economic growth but are not explicitly accounted for in the model.

RESULTS AND DISCUSSION

Table 1 Descriptive Statistics Results for Human Capital Cost and Financial Performance

	Training Cost (TRC)	Health-Safety Cost (HSC)	Return on Assets (ROA)
Mean	57.47910	14.49102	0.652695
Median	56.25000	14.00000	0.712900
Maximum	88.88000	20.00000	1.000000
Minimum	21.42000	10.00000	0.453761
Std.Dev.	13.34698	2.356402	0.477546
Skewness	0.089638	0.321622	-0.641421
Kurtosis	3.276553	2.788649	1.411420
Jarque-Bera	0.755823	3.189922	29.01115
Probability	0.685291	0.202916	0.000001
Sum	9599.010	2420.000	109.0000
Sum Sq.Dev.	29571.55	921.7365	37.85629
Observations	180	180	180

Source: E-view10 Output

The mean training cost for the Nigerian commercial banks is 57.47910, with a median of 56.25000.

The maximum training cost is 88.88000, while the minimum is 21.42000, indicating a wide range of training costs among the banks. The standard deviation of 13.34698 suggests moderate variability in the training costs. The skewness of 0.089638 indicates a slightly positively skewed distribution, meaning the majority of the training costs are clustered around the lower end of the range. The kurtosis of 3.276553 is close to 3, suggesting a normal distribution of the training costs.

The Jarque-Bera test statistic of 0.755823 with a p-value of 0.685291 indicates that the training costs are normally distributed.

The mean health-safety cost is 14.49102, with a median of 14.00000. The maximum health-safety cost is 20.00000, while the minimum is 10.00000, indicating a relatively narrower range compared to the training costs. The standard deviation of 2.356402 suggests slow variability in the health-safety costs. The skewness of 0.321622 indicates a slightly positively skewed distribution, meaning the majority of the health-safety costs are clustered around the lower end of the range. The kurtosis of 2.788649 is close to 3, suggesting a normal distribution of the health-safety costs. The Jarque-Bera test statistic of 3.189922 with a p-value of 0.202916 indicates that the health-safety costs are normally distributed.

The mean return on assets is 0.652695, with a median of 0.712900. The maximum ROA is 1.000000, while the minimum is 0.453761, indicating a relatively wide range of financial performance among the banks. The standard deviation of 0.477546 suggests moderate variability in the ROA. The skewness of -0.641421 indicates a slightly negatively skewed distribution, meaning the majority of the ROA values are clustered around the higher end of the range. The kurtosis of 1.411420 is lower than 3, suggesting a platykurtic distribution of the ROA. The Jarque-Bera test statistic of 29.01115 with a p-value of 0.000001 indicates that the ROA is not normally distributed.

The descriptive statistics suggest that there is a wide range of training costs and financial performance (ROA) among the Nigerian commercial banks, indicating potential differences in their human capital investment strategies and their ability to generate returns on those investments.

The moderate variability in training costs and ROA suggests that there may be room for improvement in the consistency and efficiency of human capital management practices across the industry. The non-normal distribution of ROA indicates that the financial performance of the banks is not evenly distributed, and there may be a few high-performing banks driving the overall industry performance. The relatively low variability in health-safety costs suggests that the banks may be prioritizing basic compliance with health and safety regulations, but there may be opportunities to invest more in employee well-being and development to potentially drive better financial performance. The findings can inform the development of more targeted human capital management strategies and policies for the Nigerian banking industry, aiming to improve the consistency and efficiency of human capital investments and their impact on financial performance.

Table 2 Relationship between Human Capital Cost and Financial Performance

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	0.736275	0.156197	4.713766	0.0000
TRC	-0.000412	0.002647	-0.155746	0.8764
HSC	0.020871	0.005011	4.164821	0.0000
R-squared	0.800147	Mean dependent var.		0.712575
AdjustedR-squared	-0.705913	S.D. dependent var.		0.453923
S.E.ofregression	0.455263	Akaike info criterion		1.276019
Sum squared resid	34.19857	Schwarz criterion		1.313360
Loglikelihood	-104.5476	Hannan - Quinncriter.		1.291175
F-statistic	0.024257	Durbin-Watson stat		1.938613
Prob(F-statistic)	0.876424			

Source:E-view10 Output

The constant term is 0.736275, which represents the estimated value of ROA when both TRC and HSC are equal to zero. The constant term is statistically significant at the 0.01 level, as indicated by the p-value of 0.0000. The coefficient for TRC is -0.000412, which suggests that a one-unit increase in training cost is associated with a 0.000412 decrease in ROA, holding other variables constant. However, the t-statistic of -0.155746 and the corresponding p-value of 0.8764 indicate that the coefficient for TRC is not statistically significant, meaning that the relationship between training cost and ROA is not significantly different from zero.

The coefficient for HSC is 0.020871, which suggests that a one-unit increase in health-safety cost is associated with a 0.020871 increase in ROA, holding other variables constant. The t-statistic of 4.164821 and the corresponding p-value of 0.0000 indicate that the coefficient for HSC is statistically significant at the 0.01 level. The R-squared value of 0.800147 suggests that the model explains approximately 80% of the variation in ROA. The adjusted R-squared value of -0.705913 indicates that the model does not have a good fit, as the adjusted R-square is negative.

The F-statistic of 0.024257 and the corresponding p-value of 0.876424 suggest that the overall model is not statistically significant, meaning that the independent variables (TRC and HSC) do not jointly explain a significant amount of the variation in ROA.

The results suggest that there is no statistically significant relationship between training cost (TRC) and financial performance (ROA) in the Nigerian commercial banking industry.

This implies that the level of investment in employee training may not be a key driver of financial performance for these banks. However, the positive and statistically significant relationship between health- safety cost (HSC) and ROA suggests that investments in employee health and safety may be an important factor in improving the financial performance of Nigerian commercial banks. The poor model fit, as indicated by the negative adjusted R-squared, suggests that there are other factors beyond the human capital cost variables (TRC and HSC) that are more important in determining the financial performance of these banks.

The findings highlight the need for Nigerian commercial banks to carefully evaluate their human capital investment strategies and focus more on employee well-being and safety, as these may have a more direct impact on their financial performance. Additionally, the results suggest that there may be other human capital or organizational factors that should be considered in understanding the drivers of financial performance in the Nigerian banking industry, such as employee productivity, organizational culture, or management practices.

CONCLUSION

Based on the analysis of human capital costs and financial performance in Nigerian commercial banks, we conclude that there is a significant range in training costs and financial performance (ROA) among Nigerian commercial banks, suggesting differences in human capital investment strategies and their effectiveness. Health-safety costs show a positive and statistically significant relationship with ROA, indicating that investments in employee well-being and safety may contribute to improved financial performance. There is no statistically significant relationship between training costs and ROA, suggesting that current training investments may not be effectively translating into financial performance improvements. The overall model fit is poor, with a negative adjusted R-squared, indicating that there are likely other important factors beyond training and health-safety costs influencing bank performance. The financial performance of banks is not evenly distributed, suggesting some high-performing banks may be driving overall industry performance. The study recommends as follows:

1. Banks should focus on increasing investments in employee health, safety, and well-being programs, as these shows a positive relationship with financial performance.
2. The lack of significant relationship between training costs and ROA suggests a need to re-assess training strategies. Banks should focus on improving the effectiveness and relevance of their training programs to ensure they translate into tangible performance improvements.
3. Given the wide variability in human capital investments and performance, banks should develop more targeted and tailored human capital management strategies that align with their specific needs and goals.
4. The poor model fit suggests that banks should investigate other factors that may be influencing financial performance, such as organizational culture, management practices, employee engagement, or technological investments.

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