HUMAN CAPITAL REPORTING AND FIRMS' STOCK MARKET PERFORMANCE: A STUDY OF THE SERVICES SECTOR OF THE NIGERIAN EXCHANGE

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Abstract

Following recent findings of gross inefficiency coupled with poor productivity in the Nigerian services sector in recent times, this study aimed at examining the impact of human capital (HC) reporting on the stock market performance of listed firms in the Nigerian services sector between 2016 and 2020, a sector of the Nigerian economy that has been quite starved of accounting academic research in contemporary times. The population of this study comprised twenty-four (24) quoted firms in the services sector of the Nigerian economy as at February, 2022. All but two firms listed on the Services sector of the Nigerian Stock Exchange (NSE) were selected for this study based on the availability their annual and/or sustainability reports during the five (5) year period under review. All data were analyzed with the aid of the fixed effects hierarchical regression technique. The study revealed a positive and significant impact of HC acquisition, training and development (HCATDR) (Adj. R^2 =0.856, F (4, 108) = 26.66, p < 0.05) reporting on firms' stock market performance. However, this study discovered a negative, although insignificant impact of HC remuneration and welfare reporting (HCRWR) (Adj. R^2 =0.808, F(4, 108) = 19.28, p < 0.05). on firms' stock market. Consequently, this study concluded that HCATDR has a positive and significant impact on the stock market performance of firms in Nigeria while HCRWR has negative but insignificant impacts on the stock market performance of firms in Nigeria. This study recommended that firms' management boards should re-strategize on their HC management policies especially as regards remuneration and welfare. Local and International Standard setters were encouraged to work towards the development of specific HC Reporting Standards to combat irregular reporting patterns amongst firms globally while the Securities and Exchange Commissions were advised to enforce strict compliance with such developed HC Reporting standards.

Keywords: Reporting, Stock Market Performance, acquisition, training and development reporting, remuneration and welfare reporting

1. Introduction

In 2016, the Nigerian service sector contributed a decade-high 59.79% to the country's Gross domestic product, however by 2020; the contribution of the service sector to the GDP had dropped to 46.39%. Of course, the impact of Covid-19 pandemic on economic activities cannot be ruled out but a cursory look at the contribution of the service sector to Nigeria's GDP in 2019, just before the pandemic started reveals a figure fixed at 49.24%, which is still way below the 59.79% recorded in 2016 (CBN, 2020). ProShare (2018) revealed a positive correlation between GDP growth rate and the performance of the Nigerian stock market, as indicated by the market capitalization and All Share Index (ASI) in the last decade. That is, when GDP growth had improved, the stock market had also fared very well and vice-versa. ProShare (2018) further revealed in 2018, the Nigerian services sector ranked 8th in terms of sectoral contribution to aggregate Nigerian stock market capitalization. The service sector contributed a meager 0.99% to the Nigerian stock market capitalization despite the large influx of talents/human resources into

the service sector as attested by PWC (2018) and Aminu (2020). A closer look at these statistics begs some simple yet vital questions. First, has there been sufficient and appropriate investment in the Nigerian services sector despite the reported influx of human capital into this sector in recent times? If yes, how do we know whether such HC investment in this sector has been properly managed? These questions were some of the driving factors which propelled the conduct of this study. Of course, reliable answers to these two questions may be best obtained following a scrutiny of the nature and extent of financial and/or non-financial resources that have been committed into the human capital management policies and strategies adopted in the Nigerian services sector. Reports provided by individual firms recognized in the Nigerian services sector could provide us with reasonable means to understand possible reasons for poor labor productivity and inefficiency in this sector. A lack of value-relevance of annual or sustainability reports to investors as regards HC might have affected the flow of investments into the sector, which would have ultimately reflected in its stock market performance. The possession of feelings by labour as a factor of production implies that an organization's employees/workforce would be quite mindful of how they are managed and treated by the management. In a bid to be perceived by investors and the public as a good employer, adequate and accurate policy descriptions on personnel management, employees' working conditions, health protection and workers' rights must be provided by the management of organizations globally. Nwosu (2013) suggested that reporting valuable information on human capital helps organizations to ascertain the cost invested for employees towards their recruitment, training, payment of salaries and other benefits and in return evaluate their contributions towards its profitability.

However, Boedker, Mouristen and Guthrie (2008) argued that many organizations do not see the relevance of regarding human capital as assets; more especially, with regards to their bottom line. As such, many service firms might not feel that accounting for their human capital will make a difference to their market performance. In fact, Obara (2013) reiterated the reluctance of most Nigerian firms to account for their human assets due to the fact that they see it as an unnecessary expense and accounting operation that will require a high level of expertise to implement in their organization. Mayo (2016) noted that this reluctance could be attributed to the existence of very few studies that reveal the impact which human capital reporting could have on the stock market performance of a firm, especially in Nigeria. Based on the review of a vast body of extant literature and to the best of the researcher's knowledge, no Nigerian study has actually examined the quite possibly unique human capital reporting practices prevalent in the services sector which is highly labour-intensive and has witnessed a large influx of human capital from the agricultural and manufacturing sector in recent times (PWC, 2018; Kianto & Hurmelinna-Laukkane, 2010). At best, majority of prior studies have investigated the impacts of and relationship which exists between human capital reporting and firm performance in Nigeria. In fact, most of these prior studies have always diverted their attention to the manufacturing, banking as well as the oil and gas sector with no sole reference to the services sector of the Nigerian economy. Few prior literatures have randomly selected listed firms across all eleven

(11) recognized sectors on the Nigerian Exchange Limited; for which unrepresentative samples of firms in the services sector were chosen.

Hence, this study aims to investigate the impact of human capital reporting on the stock market performance of firms listed on the services sector of the Nigerian Stock Exchange between 2016 and 2020. This time-frame provides an ample opportunity to closely observe and assess the human capital reporting practices of firms in the services sector of the Nigerian Stock Exchange (NSE); especially since the influx of human resources into this sector in 2016 as attested by PWC (2018) and Aminu (2020). In a bid to achieve the above aim, this study seeks to assess the impact of human capital acquisition, training and development reporting (HCATDR) as well as human capital remuneration and welfare reporting (HCRWR) on the stock market performance of listed firms in Nigerian services sector specifically because these two (2) HC reporting themes represent two (2) of the four (4) aspects of human capital reporting most valuable to investors globally (Human Capital Investment and Reporting Council, 2021).

Consequently, this paper formulated the following hypotheses in null form:

- Ho_1: Human capital acquisition, training and development reporting has no significant impact on the stock market performance of listed firms in Nigerian services sector
- Ho_2: Human capital remuneration and welfare reporting have no significant impact on the stock market performance of listed firms in the Nigerian services sector

This study serves to support or disprove probable poor human capital reporting patterns in the Nigerian services sector as a contributory factor to the revealed inefficiency and poor productivity. Furthermore, the findings of this study will most possibly provide a frame of reference for sound HC policy formulation by major statutory and professional regulators in the Nigerian Business Environment; such as the Corporate Affairs Commission (CAC), Securities and Exchange Commission (SEC), the Financial Reporting Council of Nigeria, (FRCN) and the Institute of Chartered Accountants of Nigeria (ICAN). This paper also stands to enrich the body of extant literature pertaining to the services sector of the Nigerian economy; one which has been quite starved of accounting academic research in contemporary times.

The remainder of this work is structured as follows; Section 2 offers a critical overview and synthesis of relevant prior literature in order to provide a sound conceptual, theoretical and empirical framework for conducting this study while Section 3 provides a succinct description of the methodology adopted in obtaining and analyzing relevant data as well as in testing the hypotheses formulated by this study. Section 4 borders on the analyses of all data so collected in the conduct of this study adopting a range of suitable statistical techniques as well as the presentation of the results of such analyses while section 5, which represents the final section of this study discusses the findings of the data analyzed by this paper, whilst reaching informed conclusions on the basis of this study's findings and making invaluable recommendations on the grounds of the conclusions reached.

2 Literature Review

2.1 Human Capital and Human Capital Reporting (HCR)

Human Capital (HC) refers to the aggregate *cognitive*, *behavioural* and *fit* characteristics embedded in an organization's employees. The cognitive components comprise the innate and learned knowledge, skills and abilities of an organization's workforce while the willingness and capability to install such knowledge, skills and abilities make up the behavioural component. The alignment of cognitive and behavioural components with strategic imperatives depicts the fit component (Afiouni, 2013). Following the review of a vast body of extant literature, it appears that a rising number of prior and recent studies seem to disregard the human capital inherent in an organization's board of directors and this was even attested to by Khanna, Jones and Boivie (2013). However, the studies of Valenti and Horner (2019), Khanna et al. (2013) lend credence to the indispensable role of an organization's board of directors in terms of firm innovation, providing a source of competitive advantage, tendencies for expert information-processing as well as technical and professional competence; all of which have been deemed to impact positively on various performance outcomes such as innovation, firm value, market share and performance.

The American Accounting Association's Committee on Human Resources (1973) defined Human Capital Reporting (HCR) as the process of identifying and measuring data about human capital; not only the measurement of all costs or investments connected with the recruitment, placement, training and development of employees, but also the quantification of the economic values of staff members in an organization and communicating this information to interested parties. Enofe, Mgbame and Ovie (2013) emphasized the need to capitalize human capital in the statement of financial position of companies rather than writing such off as expenses in the income statement (). These studies view human capital as an indispensable asset, which drives the production process and moreover, human capital meets the criteria to be termed an 'asset' since it's a resource controlled by an entity with the hope that it will generate future economic benefits for the enterprise (Syed, 2009). However, Afolabi (2014) opined that the absence of clear-cut, specific and documented procedures or guidelines for ascertaining the 'cost' and 'value' of human capital renders HC Reporting, a vague issue and one which could lead to inconsistencies in the financial statements of various organizations in terms of the cost and carrying values of such human assets.

2.1.1 Human Capital Acquisition, Training and Development Reporting (HCATDR)

According to Adelowotan (2021), this refers to the disclosure of quantitative and qualitative information as regards the procedures for the demand and supply of human capital as well as the policies put in place by an organization's management for the purpose of enhancing the competencies and skills of its workforce.

2.1.2 Human Capital Remuneration and Welfare Reporting (HCRWR)

This involves the provision of quantitative and qualitative information on workforce recognition and reward, share option scheme, employee compensation, job satisfaction, assets acquisition

scheme, executive compensation scheme and share scheme (Adelowotan, 2021). It basically involves the disclosure of all quantitative and qualitative data as regards the various measures, policies and strategies put in place by an entity to recognize, appreciate and ensure the emotional and psychological well-being of its employees.

2.1.3 Firms' Stock Market Performance

The stock market performance of a firm is one of the two-sided perspectives of overall firm performance, with the other being *accounting-based performance* (Papagrigoriou, Kalantonis, Matsali & Kaldis, 2021). However, the market-based perspective of firm performance compared to its accounting-based counterpart is a more reliable indicator of a company's financial health and well-being coupled with the fact that these market performance indicators are more objective than their accounting-based counterparts, which are subject to elements of management manipulations (earnings management), distortions due to depreciation policies, inventory valuation, and treatment of certain revenue and expenditure items as well as differences in methods of consolidating accounts (Brammer & Millington, 2008). McKinsey Business research experts, Dobbs and Koller (2005) declared a *total return to shareholders* as the most common measure of a firm's stock market performance. The total return to shareholders for any particular year is calculated as the aggregate of share price appreciation (capital gains) and the dividend yield. However, Dobbs and Koller (2005) suggested using complementary measures such as the Market Value Added (MVA) and the Market-to-Book Value (MBV) ratio; with both measures proving to be fairer measures of absolute market performance. Market Value Added (MVA) is calculated as the number of shares outstanding multiplied by the share market price at the end of the reporting year minus invested capital. Invested capital equals the amount of the book value of stockholders' equity at the end of the reporting year. Market-to-Book Value (MBV) ratio is calculated as Market value of equity divided by the book value of equity.

2.2 Theoretical Review

2.2.1 Human Capital (HC) Theory

Marginson (2017) posited that the HC theory is built on the assumption that the marginal productivity of an individual is a function of the level of education and training received. Hence, based on the investment in an organization's workforce, high productivity levels capable of impacting investors' perceptions can be expected. t Consequently, the human capital theory proposes that adequate disclosures by an organization of its investment in its human assets serve as a basis for decision making by the firm's managers since it provides both qualitative and quantitative data on the efficiency and effectiveness of such human capital with such decisions wielding considerable power to impact on such an organization's performance in the stock market (Mishra & Mishra, 2017). For this specific reason, this study will adopt the human capital theory as its underpinning theoretical framework.

2.3 Empirical Review

This segment contains a review of past studies on various issues relating to this study. Nwauzor and LongJohn (2021) investigated the relationship between human capital accounting and the

performance of quoted oil and gas firms in Nigeria between 2013 and 2018. The results of their study showed that disclosure of superannuation and training costs have a positive but insignificant relationship with firm performance; proxied with the market share. However, compensation cost reporting has a positive and significant relationship with firm performance.

Sani and Oyedokun (2020) conducted a study aimed at assessing the influence of human resource accounting on financial performance among selected agro-allied firms in Nigeria between 2015 and 2019. The results of their study revealed that human resource acquisition reporting has a negative and significant influence on firm profitability, training and development cost reporting has a positive yet insignificant impact on firm profitability, while welfare cost reporting and health/safety expenditure reporting have negative and insignificant influences on firm performance. Nwokeji (2019) investigated the nexus between corporate social responsibility disclosures and market value of 93 listed non-financial firms in Nigeria between 2006 and 2005. Adopting the Pooled Least Square (POLS) regression, his study revealed that employee relations disclosures had a positive but statistically insignificant influence on firms' market value as proxied by the *Tobin-Q* ratio. Furthermore, *job creation*, reminiscent of HC acquisition had a negative and insignificant impact on firm performance, *investment in employees*, similar to HC training and development reporting had positive and significant impact on firm performance as captured by the *Tobin-Q*. However, employee health, safety and welfare disclosures were found to possess a positive but insignificant impact on firm performance.

Edom, Inah and Adanma (2015) examined the impact of human resource accounting on the profitability of Access Bank of Nigeria Plc., from 2003 to 2012. Using the ordinary least square analytical technique, secondary data from Access Bank of Nigeria Plc. were obtained. Their findings revealed that there is a positive and significant relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization. However, they noted that, reporting the number of staff does not have a significant impact on profit of the bank. Samudhrama, Stewart, Wickramanayake and Sinnakkannu (2014) conducted an enquiry into the value relevance of human capital based disclosures for all Malaysian Firms on the CompuStat Global Database (CGD) between 2006 and 2012 using labour productivity, investor sentiment, analyst coverage and audit quality as moderating variables. The findings of this study revealed that employee labour costs disclosures possess a significant and negative association with firm valuation. However, when the moderating factors of labour productivity, high technology, and analyst coverage and audit quality are accounted for, a significant positive correlation exists between labour costs and market valuation. The authors concluded that employee labour cost and employee headcount disclosures are value relevant in the Malaysian setting. Lajili and Ze´ghal (2006) examined the impacts of human capital disclosures on the market performance of listed U.S firms using labour costs and manually computed labour productivity metrics (labour efficiency and value of marginal productivity) as specific indicators of HC disclosure; while normal and excess portfolio returns were used to proxy market performance. The findings of their study provide some evidence for a

positive and significant relationship between labour cost information and firm portfolio performance, measured in terms of normal and abnormal returns. However, their study revealed that large firms with lower labour efficiency measures outperform their peers with higher levels of labour efficiency.

3 Methodology

The study adopted a longitudinal research design which has huge potentials of accurately monitoring the trend in the market performance of listed firms in the Nigerian services sector over time and relating such trends to changes in the pattern of their human capital reporting practices. This study utilized data drawn from secondary sources specifically, published annual and sustainability reports as well as official opening and closing share price reports retrieved on requisition from the Nigerian Stock Exchange. The population of this study comprised twenty-four (24) quoted firms in the services sector of the Nigerian economy as at February, 2022 (NSE, 2022). This study adopted a census sampling, where all listed firms in the Nigerian services sector were observed except for two (2) services firms (Medview and Tourist Company of Nigeria), which were left out of this study on the account of not being able to obtain their annual reports for the five (5)-year period between 2016 and 2020 even after frantic efforts were made to access them.

3.1 Method of Data Analysis

This study utilized descriptive and inferential statistics in analyzing the data obtained from previously highlighted secondary sources using the Statistical Packages for Social Sciences (SPSS version 23) and E views (version 10). Pre-estimnation tests namely; the Breusch-Pagan Lagrange multiplier (LM) and Hausman tests were employed in deciding on the appropriateness of the ordinary least square, random and fixed impact regression analyses in the bid to enhance the validity of the econometric models formulated for the purpose of this study. Consequently, the hypotheses formulated were tested using the fixed effects hierarchical regression techniques.

3.2 Model Specification

The econometric models used to establish the linear relationship amongst the variables adopted in this study was specified as:

$FSMP_{it} = \alpha + \theta ATDR_{it} + \beta 1FS_{it} + \beta 2tProf_{it} + \beta 3FL_{it} + \varepsilon t$ ..... eqn (1)
$MP_{it} = \alpha + \theta RWR_{it} + \beta 1FS_{it} + \beta 2tProf_{it} + \beta 3FL_{it} + \varepsilon t$ ..... eqn (2)

Where; $FSMP_{it}$ – Stock Market Performance of Firm *i* in period *t;* $ATDR_{it}$ – Human Capital Acquisition, Training and Development Reporting for Firm *i* in period *t;* RWR_{it}– Human Capital Remuneration and Welfare Reporting of Firm *i* in period *t*; FS_{it}– Size of Firm *i* in period *t;* $Prof_{it}$– Profitability of Firm *i* in period *t;* FL_{it}- Financial Leverage of Firm *i* in period *t;* α – Constant term; θ- Coefficient of independent/ regressor variables; $\beta 1$, $\beta 2$ and $\beta 3$- Coefficients of control variables; εt – Stochastic variable (error term)

Table 1.Variable Measurement and Nomenclature

S/N	Variables	Measurement
1	Total Returns to Shareholders (TRS)	$\frac{P1 - P0 + 1}{Po}$ Where; P_1 = Closing share price P_0 = Opening share price Div_1 = Dividend paid during current year
2	Market Value Added (MVA)	(Number of shares outstanding * Closing share price) – (Invested Capital). Invested capital equals to the amount of the book value of stockholders' equity (BVE) at the end of the reporting year.
3	Market-To-Book Value (MBV) ratio	Market value of equity divided by the book value of equity.
4	Human Capital Acquisition, Training and Development Reporting (HCATDR) and Human Capital Remuneration and Welfare Reporting (HCRWR)	Developed HC Reporting Indices (See Appendix)
5	Firm Size (FS)	Total Assets
6	Profitability (PROF)	Earnings Per Share
7	Leverage (LEV)	Debt-To-Total Assets Ratio

Source: Authors, 2022

In a bid to avoid biased results, this study leveraged on the previous works of Möller, Gamerschlag and Guenther (2011); Lin and Zhilin (2008);Lajili and Zeghal (2006) to control the following firm-level factors that influence market performance, namely; Firm Size (Log_Total Assets), Profitability (EPS), Financial leverage (Debt-to-Total Assets)

4 Results and Discussion

4.1 Descriptive Statistics

Table 2 provides the descriptive statistics for all variables observed in this study with a view to discovering hidden patterns amongst all variables of interest.

Table 2. Descriptive Statistics

Variables	TRS (₦'000)	MVA (₦'000)	MBV	ATDR	RWR	FS(₦'000)	PROF (₦)	LEV
Mean	**83862**	**-1688752**	**1.43**	**3.67**	**9.83**	**12887881**	**3.96**	**0.81**
Maximum	**3416040**	**10752721**	**31.39**	**16**	**22**	**1.12E+8**	**211**	**16.28**
Minimum	**-0.60**	**-28155018**	**-6.78**	**0**	**0**	**256494**	**-269**	**0.06**
Std. Dev.	**363565**	**5769807**	**4.29**	**2.21**	**4.03**	**22056281**	**56.38**	**1.65**
Skewness	**7.80**	**-1.90**	**5.33**	**1.62**	**0.53**	**3.34**	**-1.93**	**7.87**
Kurtosis	**68.47**	**10.02**	**33.78**	**10.16**	**4.18**	**14.24**	**13.24**	**72.87**
Jarque-Bera	**20575.28**	**289.36**	**4820**	**280.28**	**11.33**	**777.09**	**543.83**	**23293**
Probability	**0.000**	**0.000**	**0.000**	**0.000**	**0.003**	**0.000**	**0.000**	**0.000**
Obs	**109**	**109**	**109**	**109**	**109**	**109**	**109**	**109**

Source: E-views Output, 2022

Note: TRS; Total Returns to Shareholders: MVA; Market Value Added: MBV; Market-To-Book-Value: ATDR; Human Capital Acquisition, Training and Development Reporting: RWR; Human Capital Remuneration and Welfare Reporting: DEI; Human Capital Diversity, Equity and Inclusion Reporting: HSR; Human Capital Health and Safety Reporting: EPS: Earnings per Share: LEV; Leverage

Table 2 reveals the mean (average) values for total returns to shareholders, market value added, market-to-book value ratio, total assets, earnings per share and leverage for all the service firms observed to be ₦83, 862,000, ₦-1,688,752,000, 1.43, ₦12, 887,881,000, ₦3.96 and 0.81 respectively. HC acquisition, training and development reporting as well as HC remuneration and welfare reporting recorded average disclosure scores of 3.67 and 9.83 respectively for all the service firms observed between 2016 and 2020 indicating that the service firms during the period under review prioritized remuneration and welfare reporting over the acquisition, training and development reporting of their human assets. The maximum values for total returns to shareholders, market value added, market-to-book value ratio, total assets, earnings per share and leverage for all the service firms observed between 2016 and 2020 were ₦3,416,040,000, ₦10,752,721,000, 31.39, ₦ 112,000,000,000, ₦211 and 16.28 respectively while the minimum values of these aforementioned variables for the service firms observed between 2016 and 2020 were ₦-6000, #-28,155,018,000, -6.78, ₦256,494,000, ₦-269 and 0.06 respectively. All variables were positively skewed except for market value added and profitability as proxied by the earnings per share. In line with the rule of thumb, the total return to shareholders, market-book-value ratios, HC acquisition, training and development reporting, total assets and leverage possess *highly positively skewed* distributions since they return skewness coefficients which are positive and greater than +1. However, the market value added and profitability as proxied by the earnings per share depict a highly negatively skewed distribution since their skeweness coefficients are negative and greater than +1.

In terms of the flatness or peakedness of the tails of the variables' distribution (kurtosis), all variables have a *leptokurtic* (peaked, relative to normal) distribution since they exceed the threshold value of +3.

Furthermore, all variables of concern to this study for all the service firms observed from 2016 to 2020 did not follow a normal distribution because of the significance of the p-values revealed by the Jarque-Bera test (P <.05). The standard deviation values reveal that in descending order; HC remuneration and welfare reporting and HC acquisition, training and development reporting have the most dispersion from their average scores for the listed service firms observed by this study.

4.2 Pre-Estimation Tests

Selection between Pooled and Random Effects Regression

The *Breusch-Pagan (BP) Lagragian Multiplier* test was conducted to select between the POLS regression analyses and the Random effects regression.The null and alternative hypotheses formulated for the *Breusch-Pagan (BP) Lagragian Multiplier* test were:

i H_o: Variances across entities (firms) is zero (homoskedastic).

ii H_1: Variances across entities (firms) is not zero (heteroskedastic).

Based on test statistical result, if the null hypothesis is not rejected at 5% level, the pooled effects regression was deemed appropriate, and we therefore ran a simple POLS regression.

Table 3. Breusch-Pagan Lagrangian Multiplier Test for Heteroskedaticity

Models	Cross-Section Effects	Time(Period) Effects	Both	Implication
1	t-stat (10.655) p-value (0.0011)	t-stat (1.997) p-value (0.1576)	t-stat (12.653) p-value (0.0004)	Heteroskedasticity exists in the cross-section only
2	t-stat (8.441) p-value (0.0037)	t-stat (0.087) p-value (0.7670)	t-stat (8.529) p-value (0.0035)	Heteroskedasticity exists in the cross-section only

Source: E-views Output, 2022

While the p-values of the cross-section impacts were significant for models 1 and 2, the p-values of the time-effects for both models were insignificant, i.e., $p > .05$. Thus, models 1 and 2, which showed one-way heteroskedasticity (cross-section effects) were tested using one of the fixed or random- effects regression; based on the results of a *Hausman test* conducted in the succeeding sub-section of this chapter.

Selection between Random and Fixed Effects Regression

The null and alternative hypotheses formulated for the *Hausman* test were:

- H_o: Errors (*ui*) are correlated with the regressors; preferred model is random effects
- H_1: Errors (*ui*) are not correlated with the regressors; preferred model is fixed effects

Based on test statistical result, if the null hypothesis is rejected at 5% level, the fixed effects regression was deemed as more appropriate.

Table 4. Fixed or Random Effects Regression Selection Test (Hausman Test)

Models/Hypotheses	Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
1	Cross-Section Random	65.177269	4	0.0000
2	Cross-Section Random	67.105090	4	0.0000

Source: E-views Output, 2022

Based on the results of the *Hausman* test, the null hypothesis for Models 1 and 2 were rejected since the p-values of their Chi-Sq. Statistic reveal significant results ($p < 0.05$). In other words, for both models established to test the hypotheses formulated in this study, errors (*ui*) are not correlated with the regressors; hence, the preferred regression analyses was the fixed effects regression.

4.3 Fixed Effects Regression Analyses

Hypothesis One

Ho_1: Human capital acquisition, training and development reporting has no significant impact on the market performance of service firms in Nigeria.

Table 5. HC Acquisition, Training and Development Model Summary

Models	R	R^2	Adj. R^2	Std. Error	Change Statistics				Sig. F
					R Sq	F stat	df1	df2	
1	.765[a]	.585	.573	1251901.79	.585	49.345	3	105	.000
2	.812[b]	.660	.647	1139311.40	.075	22.778	1	104	.000

Source: SPSS Output, 2022 a. Predictors: (Constant), LEV, Firm Size, EPS
b. Predictors: (Constant), LEV, Firm Size, EPS, ATDR

From the model summary tables above, the Model **2** R Square change of 0.075 imply that whilst controlling for the overlapping effects of firm size, firm profitability and firm leverage, human capital acquisition, training and development reporting (HCATDR) accounted for a significant 7.5% of the variation/volatility in the market performance of listed firms in the Nigerian services sector between 2016 and 2020.

Table 6. HC Acquisition, Training and Development Fixed Effects Regression Table

Variable	Coefficient	t-Statistic	Prob.
C	878735.1	2.364740	0.0204
HCATDR	313752.7	5.439548	0.0000
FIRM_SIZE	-0.203786	-8.007591	0.0000
PROF	8724.500	4.000390	0.0001
LEV	33119.26	0.588023	0.5581
R-squared	0.889243		
Adjusted R-squared	0.855882		
F-statistic	26.65545		
Prob(F-statistic)	0.000000		

Source: E-views Output, 2022

The fixed effects regression in Table shows that, taken as a set, human capital acquisition, training and development reporting (HCATDR), firm size, profitability and leverage, significantly impacted the market performance of listed firms in the Nigerian services sector between 2016 and 2020. (*Adj.* R^2 =0.856, F (4, 108) = 26.66, $p < 0.05$). Furthermore, whilst controlling for the overlapping impact of firm size, profitability and leverage, human capital acquisition, training and development reporting had a positive and significant impact on the market performance of listed firms in the Nigerian services sector between 2016 and 2020. Hence, the null hypothesis which states that human capital acquisition, training and development reporting has no significant impact on the market performance of listed firms in Nigerian services sector was rejected.

Hypothesis Two

Ho_2: Human capital remuneration and welfare reporting has no significant impact on the market performance of service firms in Nigeria.

Table 7. HC Remuneration and Welfare Reporting Model Summary

Models	R	R^2	Adj. R^2	Std. Error	Change Statistics				Sig. F
					R^2	F	df1	df2	
1	.765[a]	.585	.573	1251901.799	.585	49.345	.765[a]	.585	.573
2	.765[b]	.585	.569	1257699.152	.000	.034	.765[b]	.585	.569

Source: SPSS Output, 2022 a. Predictors: (Constant), LEV, Total assets, EPS

b. Predictors: (Constant), LEV, Total assets, EPS, RWR

From the model summary tables above, the Model 2 R Square change of 0.000 imply that whilst controlling for the impacts of firm size, firm profitability and firm leverage, human capital remuneration and welfare reporting (HCRWR) accounted for an insignificant 0% of the variation/volatility in the market performance of listed firms in the Nigerian services sector between 2016 and 2020.

Table 8. HC Remuneration and Welfare Reporting Fixed Effects Regression Table

Variable	Coefficient	t-Statistic	Prob.
C	2153238.	497089.1	0.0000
HCRWR	-58919.79	42776.59	0.1721
FIRM_SIZE	-0.170373	0.029911	0.0000
PROF	10830.43	2561.711	0.0001
LEV	54654.11	65855.60	0.4090
R-squared	0.853116		
Adjusted R-squared	0.808874		
F-statistic	19.28291		
Prob(F-statistic)	0.000000		

Source: E-views Output, 2022

The fixed impacts regression in Table shows that, taken as a set, human capital remuneration and welfare reporting, firm size, profitability and leverage, significantly impacted the market performance of listed firms in the Nigerian services sector between 2016 and 2020. Furthermore, human capital remuneration and welfare reporting (HCRWR) (*Adj*. R^2 =0.808, $F(4, 108) = 19.28$, $p < 0.05$), whilst controlling for the overlapping impact of firm size, profitability and leverage, had a negative and insignificant impact on the market performance of listed firms in the Nigerian services sector between 2016 and 2020. Hence, the null hypothesis which states that human capital remuneration and welfare reporting has no significant impact on the market performance of listed firms in Nigerian services sector was accepted.

4.4 Discussion of Findings

Following the results of various statistical estimations and analyses performed in the preceding section of this study; the findings of this study revealed that; whilst controlling for the overlapping effect of firm size, profitability and leverage, HC acquisition, training and development reporting had a positive and

significant impact on the market performance of listed firms in the Nigerian services sector between 2016 and 2020. This finding corroborates that of Sanni and Oyedokun (2020) and Nwokeji (2019). Furthermore, the revelation of a positive and significant impact of HC training and development reporting in this study seems to corroborate the findings of Edom, Inam and Adanma (2015), which revealed positive and significant impacts of HC training cost disclosures on firm profitability. As a matter of fact, this finding lends huge credence to the *human capital* theory which posits that the education, training and development of human assets remains the greatest means of enhancing organizational stock market performance. Conversely, controlling for the overlapping effects of firm size, profitability and leverage, HC remuneration and welfare reporting had a negative but insignificant impact on the market performance of listed firms in the Nigerian services sector between 2016 and 2020. This suggests that as service firms undertook measures to improve disclosures as regards as regards their workforce remuneration policies, their performance in the stock market diminished. This result totally contradicts the findings of Lajili and Ze´ghal (2006) which revealed positive and significant impacts of labour costs on stock market performance and slightly contradicts the findings of Nwauzor and LongJohn (2021), Papagrigoriou et al. (2021), Abdullah et al. (2009) which revealed positive albeit, insignificant impacts of HC remuneration cost reporting on firm performance. However, the finding of Samudhrama et al. (2014) which disclosed a negatively insignificant impact of labour costs on firm valuation appears to have been corroborated by the findings of this study. However, the possible reason for this negative, although insignificant impact could be a perception of poor remuneration and welfare policy amongst investors in the Nigerian services sector.

4.5 Summary and Conclusion

This study concludes that HC acquisition, training and development reporting has a positive and significant impact on firms' stock market performance in Nigeria. However, HC remuneration and welfare reporting has a negative but insignificant impact on firms' stock market performance in Nigeria. This study admonishes firms to re-strategize on their HC management policies especially as regards remuneration and welfare issues. In addition, adequate and suitable remuneration/ compensation plans should be devised to encourage the acquisition, motivation and retention of valuable, unique, inimitable and well organized human assets who have the greatest potential to drive firm performance in the stock market. Despite complexities reportedly associated with the application of human capital reporting in the financial reporting environment, the International Accounting Standards Board as a global standard-setter should build on and devise means to improve on the already existing platforms of standards like IAS 38 (Intangible Assets) so that new standards which directly and adequately address HC issues in the Financial Reporting setting can come to the fore. Consequently, owing to the flexible nature of International Accounting Standards, local standard setting bodies (such as the Financial Reporting Council in the case of Nigeria) ought to come in by modifying potential human capital accounting standards developed by the IASB to suit and conform with domestic realities.

Moreover, there is an urgent need for the Securities and Exchange Commission in Nigeria to enforce the preparation of sustainability reports as distinct from the conventional practice by Nigerian firms of discussing sustainability issues in the annual reports in order to fill the evident gap in the Nigeria's sustainability reporting practice.

References

Adetokunbo, A. M. & Edioye, O. P. (2021). Response of economic growth to the dynamics of service sector in Nigeria. *Future Business Journal*, 6(1), 1-10.

Afolabi, S. O. (2014). Human Resources Accounting and Disclosure in Financial Statement: Literature Review. *Research Journal of Finance and Accounting*, 5(22), 64-75.

American Accounting Association (1973). Report of the committee on human resource accounting. *The Accounting Review*, 48(Supplement), 169–185.

Bassey, B. E. & Tapang, A. T. (2012). Expensed human resources cost and its influence on corporate productivity: A study of selected companies in Nigeria. *Global Journal of Management and Business Research*, 12(5), 3-8.

Boedker, C., Mouristan, J. & Guthrie, J. (2008). Enhanced business reporting: international trends and possible policy directions. *Journal of Human Resource Costing & Accounting*, *12*(1), 14.

Brammer, S. & Millington, A. (2008). Does it pay to be different? an analysis of the relationship between Corporate Social and Financial Performance. *Strategic Management Journal*, 29, 1325-1343.

Dobbs, R. & Koller, T. (2005). Measuring Stock Market Performance. McKinsey on Finance, *Perspectives on Corporate Finance Strategy*, 16 (2005), 1-6.

Di Vaio, A., Palladino, R., Hassan, R. & Alvino, F. (2020). Human resources disclosure in the EU Directive 2014/95/EU perspective: A systematic literature review. *Journal of Cleaner* Production, 257 (2020), 120-509.

Edom, G. O., Inah, E. U. & Adanma, E. S. (2015). The impact of human resource accounting on the profitability of a firm: Empirical Evidence from Access Bank of Nigeria PLC. *European Journal of Accounting, Auditing and Finance Research*, 3 (7): 76-94.

Enofe, A. O., Mgbame, C. & Otuya, S. (2013). Human resource accounting disclosure in Nigerian quoted Firms. *Research Journal of Finance and Account*, 4 (13), 222-1697.

Human Capital Investment and Reporting Council. (2021). The State of Human Capital Disclosure - Mid 2021. *An Annual Publication of the Human Capital Investment and Reporting Council*, 1-15.

Khanna, A., Papadavid, P., Tyson, J. & te Velde, W. (2016) The role of services in economic transformation with an application to Kenya. *Supporting Economic Transformation (SET)*, ODI and UK aid, 1-5.

Khanna, P., Jones, C. & Boivie, S. (2013). Director Human Capital, Information Processing Demands and Board Impactiveness. *Journal of Management*, 31 (2), 2013.

Lajili, K. & Zeghal, D. (2006). Market performance impacts of human capital disclosures. *Journal of Accounting and Public Policy*, 25(2), 171–194.

Nwauzor, C. O. & Long John, T. B. (2021). Human Capital Accounting and Firm Performance: A Study of Oil and Gas Firms in Nigeria. *Journal of Accounting and Finance*, 2(2), 1-19.

Nwokeji, N. A**.** (2019). Nexus between corporate social responsibility disclosures and market value of listed non-financial firms in Nigeria. *International Journal for Innovative Research in Multidisciplinary Field*, 5(3), 247-255.

Papagrigoriou, A., Kalantonis, P., Matsali, C. & Kaldis, P. (2021). Modern business activities and firms' performance: The case of corporate social responsibility, evidence from the Greek Listed Firms in the Athens Stock Exchange. *Modern Economy*, 2021 (12), 429-451.

Price-Water Cooper House. (2018). Structural transformation and jobless growth in Nigeria. Retrieved from https://www.pwc.com/ng/en/publications/structural-transformation-and-jobless-growth-in-nigeria.html

Proshare. (2018). Financial Services Sector is the Most Capitalized Sector; Contributes 31.62% to Total Market CAP. Retrieved from https://www.proshareng.com/news/Capital-Market/Financial-Services-Sector-is-the-Most-Ca/37950

Samudhrama, A., Stewart, E., Wickramanayake, J. & Sinnakkannu, J. (2014). Value relevance of human capital based disclosures: Moderating impacts of labour productivity, investor sentiment, analyst coverage and audit quality. *Advances in International Accounting*, 30, (2014), 338–353.

Syed, A. M. (2009). Human resource accounting disclosure of Bangladeshi companies and its association corporate characteristics. *BRAC University Journal*, (1) 1, 35-43.

Valenti, A. & Horner, S. (2019). The Human Capital of Boards of Directors and Innovation: An Empirical Examination of the Pharmaceutical. *International Journal of Innovation Management*, 24(6), 2019.

Appendix: Human Capital Reporting Indicators

S/N	Human Capital Acquisition, Training and Development Reporting (HCATDR) Indicators
1	Information as regards employee recruitment and retention (mode of recruitment, number of employees recruited, current staff strength as well as employee turnover statistics)
2	Disclosure of employee recruitment, selection, hiring and placement costs
3	Information pertaining to the training and development of employees (details of in-house and outsourced expert training programmes, overseas training scheme, e.t.c.)
4	Disclosure of training and development costs
5	Information pertaining to the impactiveness of employee training and development programmes initiated

	Human Capital Remuneration and Welfare Reporting (HCRWR) Indicators
1	Description of remuneration packages (wages & salaries, share options, pension contribution, allowances, bonuses and employee compensation plans, e.t.c)
2	Disclosure of monetary value of remuneration packages made available to the organization's employees
3	Information on benefits-in-kind schemes for employees (recreational activities, compensation, gifts and social functions organized to reward deserving employees, transportation, maternity leave, holiday, subsidized canteen services, accommodation, e.t.c for employees)
4	Disclosures regarding job satisfaction levels of employees