Effect of Intellectual Capital on Performance of Multinational Companies in Nigeria

HARUNA, Dzugwahi

Department of Accounting, Bingham University, Karu, Nasarawa State

E – Mail: hdbirdling@gmail.com, Phone No: +234 8028411327

Abstract

In recent times, intellectual capital efficiency is the driving force for performance. This study seeks to ascertain the effect of intellectual capital on the performance of multinational companies in Nigeria. The longitudinal research design employed and data collected from the sampled twenty-four multinationals for the period of ten years 2010 to 2019. The data for the study analyzed using a panel regression with the aid of STATA 16 software. Resource-based theory underpinned the study. Price earning (PE) ratio used as a proxy for performance in the study; while intellectual capital the independent variable of the study proxied by Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), and Structural Capital Efficiency (SCE). The control variables Revenue Growth (REVG), Firm Size (LFSIZ), and Firm Age (FAGE). The result revealed that Capital Employed Efficiency (CEE) has significantly and positively impacted the performance of multinational companies operating in Nigeria. Other independent variables, Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE) do not affect the performance of multinational companies in Nigeria. The study recommends that companies should invest in more revenue-generating activities as it significantly improved the performances of companies. They should pay attention to the development of human capital and infrastructure, subsequently affect the performance of companies in Nigeria.

Keywords: Intellectual Capital, Value-Added Intellectual Coefficient (VAIC), Performance, Multinationals

INTRODUCTION

The focus of global investment and reporting is shifting from traditional corporate reporting that accounts mostly for financial capital to reporting in an integrated manner that incorporates financial, manufactured. intellectual, human, social and relationship and natural capitals. Organization for Economic Co-operation and Development asserts that investment is gradually moving from physical assets to intangible assets (OECD, 2015). In the 1970s tangible assets account for only 20% of the total market value of S & P 500 companies which indicates that the significant intangible value of the assets of companies remains unaccounted for. Intellectual capital is a component of intangible assets (IAS, 38). Intellectual capital is defined by Value-Added Intellectual Coefficient (VAIC). The VAIC consist of three components: Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE). Currently, the stock portfolio performance of the Standard and Poor's 500(S&P 500) index shows that the top five (5), S& P 500 are technological and intellectually based companies. The top 5 companies in descending order Apple Inc., Microsoft Corporation, Amazon, Com Inc., Facebook and Google, Empirical evidence showed that the intellectual capital and intangible assets significantly improved profitability, efficiency and over the performance of companies (Bontis et al., 2018, Kasogo, 2020, Ousama et al., 2020). For companies to have a cutting edge advantage and sustain relevance globally, the need to continuously innovate and develop new technologies and the sharpening of skills and knowledge of employees becomes critical (Baye et al., 2014).

Although, Nigeria is yet to adopt an integrated reporting system, however, multinational companies operating in Nigeria whose parent companies adopted an integrated reporting approach to this study sought to assess the effect of intellectual capital on the performance of multinational companies in Nigeria. This study, threfore aims at assessing the effect of intellectual capital on the performance of multinational companies operating in Nigeria. The basic hypothesis underlying this study are stated thus:

Ho₁: Capital employed efficiencyhas no significant effect on the performance of listed multinational companies in Nigeria.

Ho₂: Human capital efficiencyhas no significant effect on the performance of listed multinational companies in Nigeria.

Ho₃: Structural capital efficiencyhas no significant effect on theperformance of listed multinational companies in Nigeria.

LITERATURE REVIEW

Conceptual Framework

This study adopted Value-Added Intellectual Coefficient (VAIC) conceptual model from (Bontis et al., 2018Yusuf, 2018, Kasogo, 2020, Sulaiman et al., 2020, Duho&Agomor, 2021). The VAIC is made up of three components Structural Capital Efficiency (SCE), Human Capital Efficiency (HCE) and Capital Employed Efficiency (CEE) as shown below:

VAIC Value added intellectual coefficient SCE HCE CEE 4 Structural capital efficiency Human capital efficiency Capital employed efficiency SC VA CE 6 HC VA VA Structural capital Value added Value added Value added Capital employed

Figure 1: Concveptual Model of Value-Added Intellectual Coefficient (VAIC)

Source: Kompalla, 2016

Value-Added Intellectual Coefficient (VAIC) is a measure of intellectual capital and evaluating the efficiency of investment in intellectual capital in relation to value creation (Agbi et al. 2020). Structural Capital Efficiency (SCE) on the other hand, is the ratio of structural capital to value added. Human Capital Efficiency (HCE) measures value added to investment in human capital and is an indication human capital performance (Agbi et al. 2020), while Capital Employed Efficiency (CEE) is the ratio of value added to capital employed (Kompalla,2016), thus; Intellectual Capital (IC) = VAIC = SCE+HCE+CEE.

Empirical Review

Bontis (2018) examined the relationship between intellectual capital (IC) and economic performance with a focus on social cooperative enterprises (SCEs) for not for profit-making organizations in Italy. One hundred and fifty-one (151) Social Cooperative Enterprises for the study. Multiple regression used in analyzing the dependent variable (Return on Assets, ROA) and independent variables VAIC components (Human capital, relational capital, and structural capital). The study discovered that human and relational capital positively affected the economic performances of SCEs not-profit organizations in Italy. Yusuf

(2018) studied the impact of intellectual capital on the performance of Deposit Money Banks (DMBs) in Nigeria. The designed and sourced data from a primary source through administration of questionnaire and secondary source from the published financial statements of the 19 DMBs in Nigeria from 2006 to 2017. Resource-Based Theory, Human Capital Theory and Stakeholder Theory, VAIC model and regression model employed in the establishment of causal relationship among the variables of the study. The study revealed that Structural Capital Efficiency significantly impacted the performance of Deposit Money Banks in Nigeria while Capital Employed Efficiency, Human Capital Efficiency and Relational Capital Efficiency showed a non-significant relationship with the performances of DMBs in Nigeria.

Panel data sourced from listed firms on Da res Salaam Stock Exchange (DSE) were employed by Kasogo (2020) to investigate the effect of intellectual capital on the performance of listed firms in the manufacturing and service sectors from 2010 to 2019. Although DSE a small stock exchange market with 28 listed firms across all sectors of the economy. The study anchored on the Resource-Based Theory of knowledge and the concept of Value Added Intellectual Coefficient (VAIC) in establishing relationship among the variables of the study. The study employed four proxies for performance as the dependent variable (Return on Assets (ROA), Asset Turnover Ratio(ATO), Sales Growth (SG), and TOBIN's Q (Market Value)). Intellectual Capital (IC) the dependent variable of study proxied by Human Capital Efficiency (HCE), Capital Employed Efficiency (CEE) and Structural Capital Efficiency (SCE). Firm size is the control variable of the study ascertained by taking the logarithm of the sales for the period of study. The regression model used in the analysis of Human Capital Efficiency (HCE), Capital Employed Efficiency (CEE) and Structural Capital Efficiency (SCE) on performance. The outcome of the study revealed that Structural Capital Efficiency (SCE) affected performance while Human Capital Efficiency (HCE), Capital Employed Efficiency (CEE) negatively impacted performance which called for more investment in the human capital of companies in Tanzania. Ousama et al., 2020 investigated the impact of intellectual capital (IC) on the financial performances of thirty-seven (37)Islamic banks transacting in the Gulf Cooperation Council (GCC). The period of study covered three years from 2011 to 2013 and data sourced from the financial statements of the Islamic banks in GCC. The Return on Assets (ROA) and Return on Equity the dependent variables of the study. The VAIC components Capital Employed Efficiency (CE), Human Capital Efficiency (HC), and Structural Capital Efficiency (SC) are the independent variables of the study. Ordinary Least Square (OLS) employed in the analysis of the variables of the study. The outcome of the study revealed that Capital Employed Efficiency and Human Capital Efficiency significantly affected the financial performance (ROA and ROE) of Islamic banks but Structural Capital Efficiency insignificantly impacted the financial performance of Islamic banks operating in GCC.

Sulaiman et al., 2020 investigated the effect of Value Added Intellectual Coefficient (VAIC) on the financial performance of Health Care Firms in Nigeria from 2009 to 2019. The independent variable is the intellectual capital; return on assets (ROA) dependent variable of the study and managerial ownership introduced as the moderating variable. Financial leverage and Firm age were the control variables and Resource-Based Theory underpinned the study. The ex-post factor research and Ordinary Least Square (OLS) regression were adopted. The study disclosed that VAIC insignificantly affected financial performance (Return on Assets). Meanwhile, further analysis with the moderating effect of managerial ownership made VAIC significantly impacted Return on Assets (ROA). Zhang et al., 2021 research on the effect of intellectual capital investment on the performance of the textile and apparel companies in China. A sampled 35 companies for the period of six years (2013 to 2018) with modification to Value added intellectual coefficient (MVAIC). The dependent variables Profit Margin (PM), Return on Assets (ROA), and Return on Equity (ROE) proxied performance. The intellectual capital (IC) the independent variables proxied by Structural Capital Employed (SCE), Physical Capital, Human Capital Efficiency (HCE), Relational Capital Efficiency (RCE) and Innovation Capital Efficiency (INCE). The control variables include Firm Size determined by the natural logarithm of total assets, Debt ratio, Firm age ascertained by the logarithm of incorporation date of companies, and Gross Domestic Product (GDP). Physical Capital, Human Capital, Structural Capital and Relational Capital greatly influenced the

performances of textile and apparel companies in China. However, Innovation Capital failed to stimulate performance.

Duho and Agomor (2021) assessed the impact of intellectual capital on the performances of listed nonfinancial firms in the West African Sub-region. Sixty-two (62) companies sampled across West African Countries of Ghana, Nigeria and Cote d'Ivoire. The Value Added Intellectual Coefficient (VAIC) proxied intellectual capital (IC), the independent variable of the study. Return on Assets (ROA) represented performance the dependent variable of the study. A panel correction standard error multiple regression used to establish the relationship among the variables of the study. The result showed that Structural Capital Efficiency (SCE) influenced performance significantly while Human Capital Efficiency (HCE) and Capital Employed Efficiency (CEE) insignificantly affected the performance of non-financial firms in West Africa. Asare et al., 2021 examined twenty-four banks in Ghana, West Africa, from 2006 to 2015 in establishing a relationship between intellectual capital (IC) and assets quality. Intellectual capital is the independent variable of the study proxied by the Value-Added Intellectual Coefficient (VAIC) which consists of Capital Employed Employed (CEE), Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE). Asset quality of the bank the dependent variable of the study proxied by the ratio of non-performing loans to gross loans and advances of the bank. Panel regression used in the analysis and the study found the VAIC does not affect the quality of the asset of banks. However, when VAIC broke into parts analysis that Human Capital Efficiency and Structural Capital Efficiency significantly affected the quality of the assets of the banks. It was established from the literature reviewed that Value Added Intellectual Coefficient (VAIC) brokendown into three components: Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), and Structural Capital Efficiency (SCE) served as a proxy for intellectual capital. Most studies used Return on Assets (ROA), Return on Equity (ROE), TOBIN's Q, Profit Margin (PM) as proxies for the dependent variable (financial performance). The effect of intellectual capital on financial performance in various sectors of the Nigerian economy and beyond were examined. However, specifically little or no studies assessed the effect of intellectual on performances of listed multinational companies operating in Nigeria. This study is undertaken to explore this gap. The study adopted Price-Earning(PE) ratio as the measure of financial performance of the Multinationals doing business in Nigeria.

Theoretical Discussion

Resource-Based Theory

The resource-based theory postulates that the image and reputation of a company aiming at sustaining competitive advantage by effective and efficient utilization and control of resources that are both tangible and intangible (Baye et al.). The concept of value-added is adjudged valid measure for conceptualizing a company's performance. Morris et al. 2010 established that Resource-Based Theory in a portfolio of resources, the conceptualization resource-based theory of firm resources in a situation where the quality and the availability of the number of resources in a portfolio is the prime factor in the determination of organizational performance. In this study, resource-based theory is the solid foundation in explaining the intellectual capital resources in influencing the performance of multinational companies in Nigeria. A component of intellectual capital the capital employed efficiency significantly influenced the performance of multinational companies in Nigeria.

METHODOLOGY

The study used a longitudinal research design because the researchers would not interfere with the variables of data collected. Longitudinal research design allows participants to collect data for a group over time. The population of the study consists of forty multinational companies operating in Nigeria, out of which a sample of twenty-four companies selected using the purposive sampling technique. The data of the sampled companies sourced based on the data availability, from the Nigerian Stock Exchange (NSE) and the published financial statements. The study period is for 10 years, from 2010 to 2019. The

data for the study analyzed using a panel regression with the aid of STATA 16 software. Post regression diagnosis conducted using Jacque-Bera normality test, Variance Inflation Factor (VIF). Breusch-Pagan / Cook-Weisberg tested for heteroskedasticity, Breusch and Pagan Lagrangian multiplier tested for random effects and a robust random test, Hausman was conducted. The study is carried out at a 5% significant level.

Model Specification

Price earning (PE) ratio used as a proxy for performance in the study; while intellectual capital the independent variable of the study proxied by Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), and Structural Capital Efficiency (SCE). The control variables Revenue Growth (REVG), Firm Size (LFSIZ), and Firm Age (FAGE). In examining the effect of intellectual capital on the performance of multinational companies operating in Nigeria the study adopted with modification the model applied by Lu et al. 2021as follows:

PE ratio_{it}=
$$b_0 + b_1CEE_{it} + b_2HCE_{it} + b_3SCE_{it} + b_4REVG_{it} + b_5LFSIZ_{it} + b_6FAGE_{it} + \mathcal{E}_{it}$$
 (1)

Where PE ratio = shareholders wealth the dependent variable of the study.

Independent variables:

CEE = Capital Employed Efficiency

HCE = Human Capital Efficiency

SCE = Structural Capital Efficiency

Control variables

REVG = Revenue Growth

LFSIZ = Firm Size

FAGE = Firm Age

 $b_0, b_1, b_2, \dots b_t$ = coefficient of the regression.

i = number of multinational companies, t = number of years

 \mathcal{E} = error or random variable or residual

Variables Measurement

Price to Earnings per share (PE ratio) in numbers is computed as the annual average monthly closing share price divided by Earnings Per Share (EPS). PE ratio = [Share Price/EPS]. The EPS is calculated by dividing profit or loss attributable to ordinary equity holders of the parent divided by the weighted average number of ordinary shares outstanding during the period.

Capital Employed Efficiency (CEE) in numbers is computed as Revenue minus Cost of Revenue divided by Total Assets minus Intangible Assets (CEE=R-CR/TA-IA).

Human Capital Efficiency (HCE) in numbers is calculated as Revenue minus Cost of Revenue divided by Staff Cost (HCE=R-CR/SC).

Structural Capital Efficiency (SCE) in numbers is computed as Revenue minus Cost of Revenue and Staff Cost divided by Revenue minus Cost of Revenue.

$$SCE = [(R-CR+SC)/(R-CR)].$$

Value Added Intellectual Coefficient (VAIC) in numbers is calculated as the sum of Capital Employed Efficiency plus Human Capital Efficiency plus Structural Capital Efficiency.

VAIC = [CEE + HCE + SCE].

Revenue Growth (REVG) is calculated by dividing the current year revenue minus the previous year revenue by the previous year revenue. REVG = (CYR-PYR/PYR).

Firm Size (LFSIZ) is arrived at by taking the natural logarithm of total assets of companies.

Firm Age (FAGE) is the number of years after being listed on the floor of the Nigerian Stock Exchange.

Table 1: Study Variable Measurements

Variable	Variable	Measurement	Source(s)
Acronym	Name		
PE ratio	Price Earning ratio	Profit or loss attributable to ordinary equity holders divided by weighted average number of ordinary shares	(IASPLUS.COM, 2021) & NSE, 2021).
CEE	Capital Employed Efficiency	CEE=R-CR/TA-IA	Chikwendu, Okafor & Jesuwunmi (2020).
НСЕ	Human Capital Efficiency	HCE=R-CR/SC	Chikwendu, Okafor & Jesuwunmi (2020).
SCE	Structural Capital Efficiency	$SCE = (\underline{R-CR+SC})$ $(R-CR)$	Agbi, Popoola &Edem (2020).
VAIC	Value Added Intellectual Coefficient	CEE + HCE + SCE	Agbi, Popoola &Edem (2020).
REVG	Revenue Growth	(CYR-PYR/PYR)	Kasogo (2020)
LFSIZ	Firm Size	Log of Total assets	Agbi, Popoola &Edem (2020).
FAGE	Firm Age	number of years listed on the NSE	Chikwendu, Okafor & Jesuwunmi (2020).

Source: Author's Compilation, 2021

RESULTS AND DISCUSSION

At this point, the empirical results and the discussion of findings are presented.

Table 2 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	
PEratio	240	13.10733	47.11764	-294	512	
CEE	240	.2537967	.1703919	0418	.762	
HCE	240	4.006661	2.811988	-1.4968	20.5385	
SCE	240	.7712923	.2566615	0	2.113315	
REVG	240	6.090355	28.4255	-100	182.2137	
LFSIZ	240	7.578032	.922728	0	9.2733	
FAGE	240	32.275	11.30665	0	47	

Source: Researchers Analysis using STATA 16

Table 2 above presented the descriptive statistics for one dependent variable (Price Earnings, PEratio), three independent variables (Capital Employed Efficiency, CEE; Human Capital Efficiency, HCE, and Structural Capital Efficiency, SCE) and three control variables (Revenue Growth, REVG; Firm Size, LFSIZ, and Firm Age, FAGE). The total number of observations is 240 with standard deviations of the variables from the mean ranging from 0.1703 to 47.12. The Capital Employed Efficiency (CEE) has the lowest standard deviation of 0.1703 followed by Structural Capital Efficiency (SCE), Firm Size (LFSIZ), Human Capital Efficiency (HCE), Firm Age (FAGE) and the PEratio with standard deviations of 0.2567, 0.9227, 2.8120, 11.3067 and 47. 1176 respectively. The Table also showed an average of 13.11 for PEratio with minimum and maximum values of 294 and 512 respectively. Capital Employed Efficiency (CEE) has a mean of 0.2538 with a standard deviation of 0.1703; the maximum CEE is 0.762 and a minimum value of negative 0.418. The Human Capital Efficiency (HCE) for the period has an average of 4.0067 with a standard deviation of 2.8112. The highest value for HCE is 20.5385 and the least value of negative 1.4968. The Structural Capital Efficiency (SCE) average 0.7713 with a standard deviation of 0.2567; the maximum and minimum values of SCE for the period are 2.1133 and zero respectively.

Table 3 Correlation Matrix

PEratio CEE HCE SCE REVG LFSIZ FAGE
PEratio 1.0000
CEE 0.2471 1.0000
HCE -0.0204 0.1527 1.0000
SCE 0.0143
REVG 0.0636 0.1020 -0.0103 0.0018 1.0000
LFSIZ 0.0857 0.0283 0.0475 -0.1183 0.2616 1.0000
FAGE 0.0100 0.0168 -0.1344 0.0571 -0.1388 -0.0133 1.0000

Source: Researchers Analysis using STATA 16

Correlation measures the degree or strength of the relationship among variables. Table 3 above shows the correlation between the dependent and independent variables of the study. There is a positive correlation of 0.2471between Price Earning (PEratio) and Capital Employed Efficiency (CEE) which implies that a unit change in CEE will cause a proportional change of 24.71% in PEratio. However, a negative correlation exists between Price Earning (PEratio) and the Human Capital Efficiency (HCE) a unit change in HCE would decrease the PEratio by 2.04%. A positive correlation of 0.0143 subsists between PEratio and Structural Capital Efficiency (SCE) meaning that a unit change in SCE causes a minimal positive in PEratio by 1.43%. Examining the correlation among independent variables (CEE, HCE, and SCE) revealed that there is an appositive correlation of 15.27% between Capital Employed Efficiency (CEE) and also a direct correlation of 23.38% between Capital Employed Efficiency (CEE) and Structural Capital Efficiency (SCE). Moreover, a positive 50.80% correlation exists between Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE). A unit change in HCE would cause a direct change of 50.80% in SCE. There is an absence of multicollinearity among the independent variables,

Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE) because their correlation is below 70%.

Table 4 Vaiance Inflation Factor (VIF)

Variable	VIF	1/VIF	
SCE	1.47	0.679020	
HCE	1.43	0.698093	
LFSIZ	1.11	0.897267	
REVG	1.11	0.897522	
CEE	1.07	0.932114	
FAGE	1.07	0.936884	
Mean VIF	1.21		

Source: Researchers Analysis using STATA 16

The mean of Variance Inflation Factor is 1.21 from table 4 above. The VIF of 1.21 is less than the benchmark of 10 and 1/VIF below 1.00 indicates that the independent variables of the data have no multicollinearity problem among the independent variables.

Table 5 Jarque-Bera (JB)Normality	Test		
	Chibar ²	JB value	
PEratio	3.90	0.0000	
CEE	24.22	5.5e ⁻ 06	
HCE	736.90	1.e ⁻ 160	
SCE	458.3	3.e ⁻ 100	
REVG	719.60	6.e ⁻ 157	
LFSIZ	3296.00	0.0000	
FAGE	39.82	2.3e ⁻ 09	

Source: Researchers Analysis using STATA 16

From Table 5 above, Jacque-Bera result of variables shows that the data is normally distributed.

Table 6 Fixed effect, Random effect regression, Hau	ısman and Lagrangia	ın multiplier test.
	Chibar ²	Prob.> chi ²
Fixed effect	0.36	0.9064
Random effect	33.57	0.0000
Breusch and Pagan Lanrangian multiplier	0.00	1.0000
Hausman test	11.15	0.0837

Source: Researchers Analysis using STATA 16

In determining whether the pooled OLS and random effect regression is the most suitable, the LM test for random effect adopted. The chi-bars² in Table 6 above is 0.00 and the corresponding prob > chi bar was 1.000, the analysis rejected the null hypothesis and adopted the alternative hypothesis that random effect is the most appropriate model. Furthermore, both fixed and random effect regressions used in the analysis. The Hausman decision criteria employed in deciding between fixed and random effect regression models. The test generated a chi-square value of 11.15 and a probability value of 0.0837, which implies that the random effect regression model is the most appropriate for the data and interpretation.

Table 7 Robust Random Effect Model

-	Rob	ust						
PEratio	Coef. St		Z	P> z	[95% (Conf. Interva	1]	
CEE	70.1165	8 14.77	134	4.75	0.000	41.16528	99.06788	
HCE	994042	.6703	3197	-1.48	0.138	-2.307845	.3197599	
SCE	-1.08775	1 7.678	516	-0.14	0.887	-16.13737	13.96186	
REVG	.02880	08 .096	5341	0.30	0.765	1603953	.2180113	
LFSIZ	3.88681	1 2.85	7326	1.36	0.174	-1.713446	9.487067	
FAGE	.00619	19 .250	0762	0.02	0.980	4852925	.4976763	
_cons	-29.6959	3 24.84	422	-1.20	0.232	-78.38575	18.99389	
sigma u	0							
sigma_e 4:	5.805052							
rho	0 (fr	action of	f vari	ance du	ie to u_i	i)		

Source: Researchers Analysis using STATA 16

The robust random effect regression result for the sampled multinational companies in Nigeria depicted in Table 7 above revealed that there is a significantly positive relationship between Capital Employed Efficiency (CEE) and shareholders wealth (proxied with the price earning ratio (PEratio)) as indicated by a coefficient value of 70.1166. This revealed that for one unit rise in CEE le would lead to a 70.1166 unit increase in shareholders wealth. The probability of CEE of 0.0000 confirmed that at 1% significant level Capital Employed Efficiency (CEE) significantly impacted shareholders wealth. An inverse relationship exists between Human Capital Efficiency (HCE) and the shareholders wealth meaning a unit rise in HCE leads to a fall in shareholders wealth by 0.9940. Similarly, Structural Capital Efficiency (SCE) has an inverse relationship with the shareholders wealth of multinational companies in Nigeria. A unit increase in Structural Capital Efficiency results in a decrease in the wealth of shareholders by 1.0878. In addition, Revenue Growth (REVG), Firm Size (LSIZE), and Firm Age (FAGE) of the sampled multinational in Nigeria has a positive relationship with the P/E ratio as explained by a coefficient of 0.0288, 3.8868, and 0.0062 indicating that for every unit increase in Revenue Growth, Firm Size, and Firm Age the will cause an increase in shareholders wealth proxied with P/E 0.0288, 3.8868, and 0.0062 units respectively.

Test of Hypotheses

Hypothesis 1: Capital Employed Efficiency has no significant effect on the performance of multinational companies in Nigeria.

The regression results as presented in Table 6 shows that the Capital Employed Efficiency has a significant effect on performance at a 5% level of significance. This provided the study with evidence of the probability of P>|z| of 0.0000, therefore rejecting the null hypothesis and accepting the alternative hypothesis that Capital Employed Efficiency has a significant positive effect on the performance of multinational companies in Nigeria.

Hypothesis 2: Human Capital Efficiency has no significant effect on the performance of listed multinational companies in Nigeria.

The regression outcome as presented in Table 6 reveals that Human Capital Efficiency has no significant effect on the performance at a 5% level of significance. The study, therefore, rejects the alternative hypothesis and accept the null hypothesis that Human Capital Efficiency has no significant effect on the performance of multinational companies in Nigeria.

Hypothesis 3: Structural Capital Efficiency has no significant effect on the performance of multinational companies in Nigeria.

The Structural Capital Efficiency of the sampled multinational companies during the study period has no significant effect on performance at the 5% level. The study rejects the alternative hypothesis and accept the null hypothesis and conclude that Structural Capital Efficiency has no significant effect on the performance of multinational companies in Nigeria.

Discussion of Findings

The result revealed that Capital Employed Efficiency (CEE) has significantly and positively impacted the performance of multinational companies operating in Nigeria. Other independent variables, Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE) do not affect the performance of multinational companies in Nigeria. The outcome of the study is inconsistent with Asare et al., 2021 that Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE) significantly impacted the financial performance and assets quality of banks in Ghana. However, our findings are consistent with Ousama et al., 2020 that Capital Employed Efficiency (CEE) greatly affected the performance of companies.

CONCLUSION AND RECOMMENDATION

In conclusion, Capital Employed Efficiency influenced significantly the performance of multinational companies in Nigeria, while Human Capital Efficiency and Structural Capital Efficiency does not affect the performance of multinational companies in Nigeria. The study concludes that capital employed efficiency is critical to the growth and survival of companies in Nigeria. The study recommends that companies should invest in more revenue-generating activities as it significantly improved the performances of companies. Companies should pay attention to the development of human capital, in turn, will positively affect the performance of companies in Nigeria. Investment in infrastructural development recommended would create an enabling environment for companies to thrive in Nigeria.

References

- Agbi, E.S., Popoola, A. &Edem, D.P. (2020). Human Capital Efficiency and Profitability of Listed Oil and Gas Firms in Nigeria. International Journal of Accounting & Finance, 9(1), 52-73.
- Asare, N., Margaret, M. L., Joseph, M. O., & Michael, E. A. (2021). Intellectual capital and asset quality in an emerging banking market. *Asian Journal of Accounting Research*, 6(1), 55-68. http://dx.doi.org/10.1108/AJAR-05-2020-0034
- Baye, F.M., Douanla, J. & Fonkem, N.M. (2014). Impact of Intellectual Capital Efficiency on the Financial Performance of Financial Institutions in Yaounde, Cameroun. *International Journal of Arts and Commerce*, 3(4). https://www.ijac.org.uk/images/frontImages/gallery/Vol. 3 No. 4/14.pdf.
- Bontis, N., Ciambotti, M., Palazzi, F., &Sgro, F. (2018). Intellectual capital and financial performance in social cooperative enterprises. *Journal of Intellectual Capital*, 19(4), 712-731. http://dx.doi.org/10.1108/JIC-03-2017-0049
- Duho, K. C.T. & Agomor, P. E. (2021). Intellectual Capital and Performance among Listed Non-Financial Firms in West Africa. *Dataking Working Paper SeriesN*° *WP2021-03-02*, Available at SSRN: https://ssrn.com/abstract=3803094
- IAS 38 Intangible Assets https://www.iasplus.com/en/standards/ias/ias38
- IASPLUS.COM (2021). IAS 33-Earnings Per Share (EPS). https://www.iasplus.com/en/standards/ias/ias33

- Kasoga, P. S. (2020). Does investing in intellectual capital improve financial performance?

 Panel evidence from firms listed in Tanzania DSE. *Cogent Economics & Finance*, 8(1).http://dx.doi.org/10.1080/23322039.2020.1802815
- Lu, Y., Tian, Z., Guillermo, A. B., Gao, S., Zhao, Y., & Zhang, S. (2021). Intellectual Capital and Firm Performance in the Context of Venture-Capital Syndication Background in China. *Complexity*, 2021http://dx.doi.org/10.1155/2021/3425725
- Kompalla, A. (2016). Analysis of correlation between intellectual capital and traditional key performance indicators within the automotive industry Literature review. https://www.researchgate.net/publication/ 303893766_Analysis_of_correlation_between_intellectual_capital_and_traditional_key_performance_indic ators_within_the_automotive_industry_Literature_review/citations
- Morris, M. H., Kuratko, D. F., Allen, J. W., Ireland, R. D., &Schindehutte, M. (2010).

 Resource Acceleration: Extending Resource-Based Theory in Entrepreneurial Ventures. *Journal of Applied Management and Entrepreneurship*, 15(2), 4-25. https://www.proquest.com/scholarly-journals/resource-acceleration-extending-based-theory/docview/497134744/se-2?accountid=194676
- NSE (2021). The Nigerian Stock Exchange www.nse.com.ng
- OECD. (2015). Lifting investment for higher sustainable growth. Economic Outlook. OECD Journal: Economic Studies, 205–279.https://www.oecd.org/investment/Economic-Outlook-97-Lifting-investment-for-higher-sustainable-growth.pdf
- Ousama, A. A., Hammami, H., &Abdulkarim, M. (2020). The association between intellectual capital and financial performance in the Islamic banking industry: An analysis of the GCC banks. *International Journal of Islamic and Middle Eastern Finance and Management, 13*(1), 75-93. http://dx.doi.org/10.1108/IMEFM-05-2016-0073
- Sulaiman, S.A., Mohammed, M.U., Tukur, I.K., & Musa, K.K. (2020). Value Added
 Intellectual Capital and Financial Performance Moderated by Managerial Ownership: Evidence from Listed Health-Care Firms in Nigeria.

 http://journal.fudutsinma.edu.ng/index.php/fjbm/article/download/1992/1456
- Yinusa, K. W. (2018). *Impact of Intellectual Capital on Performance of Deposit Money Banksin Nigeria* (Order No. 13422898). Available from ProQuest Central; ProQuest Dissertations& Theses Global. (2161112636). https://www.proquest.com/dissertations-theses/impact-intellectual-capital-on-performance/docview/2161112636/se-2?accountid=194676
- Zhang, L., Yu, Q., Jin, Z., & Xu, J. (2021). Do Intellectual Capital Elements Spur Firm

 Performance? Evidence from the Textile and Apparel Industry in China. *Mathematical Problems in Engineering*, 2021http://dx.doi.org/10.1155/2021/7332885