

Intellectual Capital Efficiency and Enterprise Value Added

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Abstract- *This study examined intellectual capital efficiency and enterprise value added. The specific objectives were to investigate whether human capital, structural capital, capital employed and relational capital disclosure have significant effect on enterprise value added of listed real estate firms in Nigeria. The secondary source of data collection was adopted in the study where the purposive sampling technique was used to select a sample size of four (4) listed real estate firms for the study. Least Square regression analysis was used in this study and the findings revealed that human capital, structural capital, capital employed and relational capital disclosure has no significant effect on enterprise value added of listed real estate companies in Nigeria. It was concluded that businesses must genuinely use their workforce as a competitive weapon in order to gain a competitive advantage and increasing worker productivity has become a key strategy to drive higher value for the companies. The study recommended that firms in Nigeria should improve their human capital efficiency by engaging in employee training as well as financial and nonfinancial rewards and that management of firms should increase capital employed and decrease structural capital investment in order to mitigate structural capital influence on cashflow performance.*

Keywords: *Intellectual Capital Efficiency, Enterprise Value Added, Human Capital, Structural Capital, Capital Employed Relational Capital Disclosure*

I. INTRODUCTION

Modern enterprises are distinguished by a significant focus on innovation, technological progress, and proficient management of skills and knowledge. Successful companies differentiate themselves through their relentless pursuit of innovation, utilization of advanced technologies, and emphasis on developing the skills and knowledge of their employees (Adegbayibi, 2021). This differs from a historical dependence on physical assets such as

equipment and machinery as the main catalysts for performance enhancement. In this changing landscape, knowledge has become the new frontier in corporate management, acknowledging that value can be derived from intangible assets, which are frequently not adequately reflected in financial statements (Adigizey *et al.*, 2024).

Over the past two decades, a significant shift in economies has occurred, transitioning from a traditional-driven model to a knowledge-intensive paradigm (Ali & Anwar, 2021). The alteration aligns with the adaptation of economies to Industrial Revolution 4.0, emphasizing competitiveness and value creation (Samwel *et al.*, 2024). Subsequently, knowledge emerged as an essential instrument for attaining a sustained competitive advantage for economies and firms within those economies. In the contemporary era, the composition of intellectual assets within a firm has evolved from the simple recruitment of highly skilled personnel to include broader elements such as structural capability enhancement, trade secrets, patents, trademarks, customer loyalty, social responsibilities, and various other intangible assets (Inwang *et al.*, 2024). The intangible asset within the organization is known as intellectual capital.

In light of sustainability objectives and intensifying competition, corporate leaders are increasingly recognizing the necessity to cultivate their intellectual capital or assets (Kweh, 2021). Intellectual capital enhances and maintains unique and non-replicable competitive advantages (Egolum, 2021). Moreover, it enhances organizational competencies and facilitates value creation. Intellectual capital enhances firms' productivity, growth, and sustainability. While the development of intellectual capital offers substantial benefits to firms that invest heavily in it, assessing its

effectiveness is crucial for their survival and sustainability. Assessing intellectual capital efficiency aids corporate leaders in determining the optimal allocation of resources for performance enhancement (Davydenko *et al.*, 2021).

The rationale for the role of knowledge, or intellectual capital, in influencing earnings and other corporate value metrics of firms has posed a significant academic challenge in recent decades. Numerous research findings have demonstrated that intangibles such as knowledge, information, and information technology are essential resources in the knowledge economy. Companies have transitioned from the industrial age to the information age; however, they still struggle to identify, measure, and manage intellectual capital within their organizations. To generate value for the organization, intellectual capital must be identified, quantified, and appraised, aligning it with the company's strategy and objectives (Popoola, 2022).

Cross-border competition necessitates that domestic companies modify their competitive stance to attain sustainable financial performance. In knowledge-intensive industries, Intellectual Capital (IC) typically constitutes the essential resource in the value creation process. Conventional metrics of corporate performance, grounded in traditional accounting principles, are inadequate in the contemporary economy. However, such measures constitute the primary foundation of decision-making. Traditional performance measurement methods may result in managers, investors, and other stakeholders making misguided decisions when companies allocate a significant portion of their investments to intangible assets. Consequently, it is necessary to examine whether traditional financial performance measurement methods are affected by intellectual capital performance. It can be contended that quantifying the value of intangible assets is challenging, and assessing any returns from these assets is also problematic (Zhang *et al.*, 2021). This study aims to investigate the effect of intellectual capital efficiency on enterprise value added in listed real estate companies in Nigeria.

II. LITERATURE REVIEW

A. Enterprise Value Added

Enterprise value added represents the additional difference in the rate of return (RoR) above a company's cost of capital. It is utilized to assess the value a company produces from invested capital. A negative economic value added indicates that a company is failing to generate value from the invested capital. Economic value added (EVA) quantifies a company's financial performance by determining the residual wealth, which is derived from subtracting the cost of capital from operating profit, adjusted for cash-based taxes. EVA is also known as economic profit, as it seeks to reflect the genuine economic profit of a company (Popoola, 2022).

Enterprise value essentially quantifies a company's worth. This valuation is assessed from either the market perspective or the accounting variables, which encompass items reported in the firm's balance sheet, namely assets and liabilities. The valuation of a firm is assessed from various perspectives, resulting in the absence of a singular measurement parameter. Wasara and Ganda (2019) delineate value through three distinct lenses: market value of equity, firm value, and enterprise value. They subsequently characterize the market value of equity as the differential between the market value of total assets and the market value of liabilities, while firm value is defined as the aggregate of the market value of equity and the market value of debt. Enterprise value is described as the comprehensive valuation of a firm, encompassing equity value, assets, liabilities, cash, and other liquid investments, all of which influence the firm's overall worth (Nguyen & Doan, 2020).

B. Intellectual Capital

Intellectual capital is seen as the aggregate of knowledge possessed by an entity from its activities of investment and continuous operation (Babatunde-Kareem *et al.*, 2025). An organization is expected to acquire knowledge in attracting more customers, strengthening the skills of employees and improving upon the internal operation. The drive to operate in accordance with the modern requirements of business is why resources are needed to be invested to improve upon the intellectual capital of organizations. When intellectual capital of an entity is improved, it is

expected that potential customers are attracted to the products or services of the company; employees' productivity is improved as well as the approach of handling tax in the organization. In the opinion of Adigizey *et al.* (2024), intellectual capital is understood to be an interesting resource in an organization that could influence several financial performance indices including profitability and value. This is because of the relevance of knowledge in modern business activities as compared with the ancient mode of conducting business. In the recent time, intellectual capital is expected to be improved in an organization to enable them to meet their expectations, or their strategic objectives drawn from the mission statement.

As the level of intellectual capital is improved in an organization, it is possible to say that the company must be one that is growing in terms of how the products or services are known in the market, how equipped the employees are in terms of handling tasks and the level of strength possessed by the company in their operating processes. Intellectual capital is an aspect of knowledge-based economy that is highly needed in the modern business practice.

C. Human Capital and Enterprise Value Added

Human capital is one component of intellectual capital and the most innovative feature for firms to act on according to the environmental changes through their knowledge, experience, and capabilities, which is applied to improve the organizational efficiency. Human capital has been consistently acknowledged in both historical and contemporary literature on finance, accounting, economics, and management due to its significance for the success of any economic organization. Ovechkin *et al.* (2021) asserted that human capital efficiency is widely regarded as a critical factor enhancing firm competitiveness and value creation in the knowledge economy. The researcher contends that the efficiency of human capital enhances firm productivity, resulting in a noticeable increase in sales revenue, asset base, and share value.

Abubakar *et al.* (2022) asserted that human capital encompasses the knowledge, skills, attitudes, expertise, and professional attributes possessed by an employee. Human capital can also be viewed as an

employee's ability to generate both tangible and intangible assets by contributing to the ongoing creation of ideas and knowledge. Human capital comprises the knowledge, experiences, skills, and abilities of staff. Udeh and Okeke (2020) argued that some of this knowledge is unique to the individual staff while some may be generic to all the workforce.

Samwel *et al.* (2024) investigated the relationship amongst human capital disclosure, business model and value of listed companies in Kenya and South Africa. The study was braced on the Stakeholder and legitimacy theories. The research design was both exploratory and confirmatory. Secondary data was collected from 137 purposefully selected companies for the period 2018-2020. Pearson correlation analysis was used in measuring the strength and direction of relationships between variables, while, stepwise regression analysis method was applied in testing for mediation effects. The results depicted that human capital disclosure has a statistically significant effect on firm value.

Inwang *et al.* (2024) examined the effect of non-mandatory information disclosures on shareholders' wealth maximization of consumer goods firms listed on the floor of the Nigerian Exchange Group from 2013 to 2024. The research design adopted for the study was ex post facto, secondary data were employed and purposive sampling technique was adopted to select 16 out of 21 listed consumer goods firms in Nigeria. The method of data analysis employed for the study Generalized Method of Moment regression and the statistical package employed was STATA 16. The findings of the study revealed that human capital disclosure has a significant negative effect on market value added.

Egolum (2021) evaluated the effect of human capital efficiency on financial performance of listed service firms in Nigeria, ranging from 2010 to 2019. Ex-post facto research design was along with sample size of sixteen (16) out of twenty-five (25) quoted service firms in Nigeria Stock Exchange. The data for the study was sourced from the Nigerian Stock Exchange Fact Books and related companies' Annual Financial Reports for the periods covered. The Panel Ordinary Least Squares Regression analysis was initially performed. Findings from the robust standard error

estimator indicate that human capital efficiency exerts a negative insignificant influence on the net profit after tax margin and a positive significant impact on the gross profit margin.

Davydenko *et al.* (2021) determined the relationship between human capital efficiency and the level of financial profitability. To conduct the analysis, the researchers used the system generalized method of moments for a broad sample of Russian firms that operate in the agribusiness industry. The study employed two financial approaches to human capital estimation. The study employed the General Method of Moments and Ordinary Least Squares Regression as estimators. The findings indicated that the efficacy of human capital significantly influences the profitability of the chosen agricultural enterprises in Russia.

H1: From the above, we hypothesize that human capital has no significant effect on enterprise value added of listed real estate companies in Nigeria.

D. Structural Capital and Enterprise Value Added

Structural capital constitutes one of the two components of intellectual capital (IC), the other being human capital. Intellectual capital quantifies the aggregate intangible value of a company within a knowledge-driven economy. According to Aluwong (2022), structural capital quantifies the intangible frameworks created by organizations that facilitate the effective operation of human capital. Proportional attention must be directed towards intangible assets (structural capital) instead of solely focusing on physical structures and equipment. This, according to the perspective of Xu *et al.* (2020), is primarily attributable to their significant contribution to enhancing a firm's financial performance.

A company's structural capital denotes its capacity to implement the procedures and frameworks that facilitate employee endeavours to achieve optimal intellectual performance and enhanced profitability, encompassing its operational functions, production methodologies, corporate culture, management philosophies, and all types of intellectual property owned by the organization. Despite an individual's intelligence, a company's procedures and practices

may hinder its intellectual capital from functioning at optimal capacity. The infrastructure that allows individuals to reach their full potential encompasses the organization's market access, organizational structure, intellectual property rights, and capacity to enhance employee productivity (Nguyen & Doan, 2020).

Arumona *et al.* (2022) examined the financial performance of publicly traded non-financial corporations in Nigeria concerning capital employed and structural capital efficiency. An ex-post facto research design was employed for the study. Secondary data from the surveyed firms was collected over the decade from 2012 to 2021, and panel regression analysis was conducted using the STATA 16 application. The results indicated that structural capital adversely affects the return on assets of publicly traded non-financial firms in Nigeria, whereas capital employed efficiency (CEE) positively influences this metric.

Popoola (2022) investigated the impact of structural capital efficiency on the financial performance of listed oil and gas companies in Nigeria from 2006 to 2018. Nine firms were selected purposefully, and data were extracted from the audited annual reports of these firms for analytical purposes. The regression analysis results indicated that structural capital efficiency has a positive and significant impact on performance, thereby underscoring the importance of these two variables in influencing the financial performance of publicly listed oil and gas companies in Nigeria.

Nguyen and Doan (2020) examined the influence of intellectual capital on corporate value within the Vietnamese context. The research sample comprises 61 manufacturing firms listed on the Vietnam stock market from 2013 to 2018. Three statistical methodologies utilized to tackle econometric challenges and enhance the precision of regression coefficients are Ordinary Least Squares, Random Effects Model, and Fixed Effects Model. The study employs value-added intellectual capital to assess a firm's intellectual capital. The findings indicate a statistically significant positive effect of human capital efficiency, structural capital efficiency, and capital employed efficiency on a company's profitability.

Abubakar *et al.* (2022) investigated the impact of intellectual capital on the financial performance (FP) of all listed Nigerian deposit money banks from 2013 to 2017. Multiple regression analysis was utilized to evaluate the four hypotheses at a 5% significance level. The study's results indicate that structural capital in aggregation positively influences the return on assets of non-depository monetary banks. Nonetheless, the individual analysis of intellectual capital components reveals a varied outcome.

H2: From the above, we hypothesize that structural capital has no significant effect on enterprise value added of listed real estate companies in Nigeria.

E. Capital Employed and Enterprise Value Added

Capital employed efficiency, also referred to as funds employed, represents the total capital utilized for profit generation by a firm or project. This metric effectively compares the relative profitability of companies while considering the capital employed. Also referred to as employed capital, it is the aggregate sum of capital utilized for profit generation by a firm or project. This metric is advantageous for assessing the comparative profitability of companies while considering the capital employed (Egolum, 2021).

Nigerian businesses, like those in numerous other countries, prepare their financial statements following the conclusion of the fiscal year, typically spanning one year or twelve calendar months. These financial statements, by displaying assets and liabilities at their net book values, aim to ascertain the firm's financial performance and position, thereby determining its net value (carrying amount). Nonetheless, the revelation of intellectual capital is an essential component of financial disclosures that has been neglected in the preparation of financial statements (Inwang *et al.*, 2024). An intellectual asset is a non-physical entity that can be recognized but lacks tangible worth. Capital employed and structural capital encompasses intangible resources such as expertise, technology, reputation, and organizational practices (Justin *et al.*, 2023).

Adigizey *et al.* (2024) investigated the correlation between intellectual capital and the financial performance of conglomerate firms listed on the Nigerian Exchange Group (NGX). The study employs

proxies such as capital employed and relational capital to assess intellectual capital, while meticulously using return on assets as an indicator of financial performance. Panel data from 2011 to 2021 was obtained from the individual financial reports of the conglomerate sectors listed on the exchange. The sample includes all six specified conglomerate firms in the NGX. A robust panel regression model is systematically employed to elucidate the intricate relationship between intellectual capital and return on assets. The findings indicate a significant impact of both capital employed and relational capital on return on assets.

Enekwe *et al.* (2022) investigated the impact of intellectual property on the financial performance of publicly traded consumer goods firms in Nigeria in 2022. The study was grounded in resource-based theory and knowledge-based theory. To conduct the Panel Ordinary Least Squares analysis for the study, the statistical software E-Views version 9.0 was employed. The regression analysis results indicate that human capital efficiency positively and significantly influences the return on assets of publicly listed consumer goods firms in Nigeria, while structural capital efficiency and capital employed efficiency exert negative and insignificant effects.

Aluwong (2022) analyses the efficacy of Nigeria's intellectual capital by sampling listed non-financial companies on the Nigerian Exchange Group market over a decade, from 2011 to 2020. Regression analysis was employed to extract secondary data from the financial statements of the sampled firm. The research indicates that value-added intellectual coefficient, structural capital efficiency, and capital employed efficiency all substantially enhance business performance. The report indicates that managers ought to prioritize structural capital and augment their investments in human capital resources such as training and ongoing education.

Haruna (2021) examined the influence of intellectual capital on the performance of multinational corporations in Nigeria, utilizing a sample of twenty-four (24) firms over a decade from 2010 to 2019. The study employed the price-to-earnings ratio as a proxy for performance, while capital employed, human capital, and structural capital efficiencies served as

proxies for the independent variables of intellectual capital. The research employed a panel regression method for data analysis, utilized a secondary data source, and implemented a longitudinal research design. The results indicated that the performance of multinational corporations in Nigeria was significantly and negatively influenced by the efficiency of capital employed. Conversely, neither the efficiency of human capital nor that of structural capital influences the performance of multinational corporations in Nigeria.

H3: From the above, we hypothesize that capital employed has no significant effect on enterprise value added of listed real estate companies in Nigeria.

F. Relational Capital Disclosure and Enterprise Value Added

Relational capital disclosure refers to reports concerning the intellectual capital cultivated, preserved, and fostered by an organization to sustain external relationships that impact the organization's performance in its annual report. Consequently, the robustness and connectivity of an organization via its clientele and external influences cultivate this vital capital. Relational capital is occasionally referred to as customer capital.

Relational capital represents the worth of organizational relationships. Generally, it is acknowledged that these relationships primarily pertain to external parties, including customers, suppliers, and shareholders. It is essential to recognize that a company's relationship with its employees generates value. Consequently, for this strategic rationale, it is imperative to keep them informed. Consequently, to progress in the examination of relational capital, it is essential to distinguish between internal relational capital and external relational capital (Popoola, 2022).

Babatunde-Kareem *et al.* (2025) investigated the impact of intellectual capital disclosure on the valuation of publicly listed financial services firms in Nigeria. This research employed an ex post facto design. This study's population comprised 37 of the 52 financial services companies listed on the Nigerian Exchange Limited (NGX) as of December 31, 2023.

Data were obtained from the published annual financial statements of the selected companies over a ten-year period (2014-2023). The multiple regression analysis method was employed to evaluate the hypotheses. The findings indicated that the disclosure of relational capital exerts a negative and insignificant impact on the valuation of listed financial services firms in Nigeria. The study determined that the disclosure of intellectual capital is a crucial element for enhancing the value of companies within the financial sector.

Enrico *et al.* (2020) examined the relational aspect of intellectual capital: an empirical analysis of brand value assessment and financial performance. An ex post facto research design was utilized, as secondary data were collected from a sample of 40 non-financial companies over a 14-year period from 2006 to 2019. A multiple regression analysis revealed a positive and significant correlation between relational capital disclosure and financial performance. The study encompassed an extensive duration and sample size; however, the findings were exclusively derived from non-financial companies.

Corvino (2019) examined the moderating influence of firm size on the relationship between relational capital and firm performance, utilizing evidence from Europe. The study employed earnings per share as the dependent variable, with 51 items pertaining to relational capital utilized to construct the relational capital index as the independent variable, while firm size and leverage served as control variables. The study's data was obtained from the annual reports of 73 companies in France, Germany, Italy, and the UK over a three-year period from 2011 to 2013. Regression analysis revealed a positive and significant relationship between relational capital and firm performance. The authors effectively sampled 73 companies from four distinct countries; however, the data collection period (2013) relative to the study's timeframe (2019) presents a substantial gap of five years, during which significant changes likely occurred that could have bolstered the findings. Silvio (2016) conducted a study examining relational capital disclosure, corporate reporting, and company performance: evidence from Europe. The research employed total revenue, net operating cash flow, and capital expenditure as dependent performance

variables. A content analysis encompassing 51 items intrinsic to the European relational capital framework was devised to gather data for the relational capital disclosure index, which served as the independent variable, while liquidity, leverage, and firm size functioned as control variables. The study conducted a cross-national analysis of a sample of 80 companies for the year 2013. Multiple regression analysis revealed that relational capital disclosure is significantly correlated with revenues, net operating cash flow, and capital expenditures. Conversely, there is no statistically significant correlation with enterprise value.

H4: From the above, we hypothesize that relational capital disclosure has no significant effect on enterprise value added of listed real estate companies in Nigeria.

III. METHODOLOGY

The *ex-post facto* research design was used in this study due to the fact that the variables cannot be manipulated by the researcher. This method was adopted since social scientific research problems do not lend themselves to experimental and controlled inquiry of the *ex-post facto* kind. The population comprises of one hundred and fifty one (151) firms listed on Nigerian Exchange Group as at 31st December, 2024. Since the entire listed firms cannot be used for the study, the study is limited to ten (10) years annual report of four (4) listed real estate firms in Nigeria. In selecting the sample, purposive sample technique was used to derive the sample size which used to ensure that the sample represents a diversity of perspectives. The secondary source of data collection was used for this study where data was gathered from audited annual reports of selected real estate firms in Nigeria. The study employed multiple regression technique of analysis using Least Squares regression estimation. This method was adopted because it enhances easy presentation and interpretation of data. The empirical model of the study is mathematically expressed as follows:

$$EVA_{it} = \alpha + \beta_1 HUC_{it} + \beta_2 STC_{it} + \beta_3 CEM_{it} + \beta_4 RCD_{it} + \epsilon_{it}$$

Where;

EVA_{it} = Enterprise Value Added

HUC_{it} = Human Capital

STC_{it} = Structural Capital
 CEM_{it} = Capital Employed
 RCD_{it} = Relational Capital Disclosure
 ϵ_{it} = Error term
 α = intercept
 $\beta_1 - \beta_3$ = Coefficients of parameters estimated

The following are the measurement of the variables in the study.

S/N	Variables	Measurement
1.	Enterprise Value Added	This forms the value added by a company's operations, adjusted for the cost of capital.
2.	Human Capital	This forms the economic value of a company's employees.
3.	Structural Capital	This forms the value of a company's intangible assets.
4.	Capital Employed	This forms the total amount of capital invested in a company.
5.	Relational Capital Disclosure	This forms the reporting of a company's intangible assets and relationships that are not easily quantifiable.

IV. RESULTS

From the below table, the dependent variable, enterprise value added (EVA) has a mean value of 0.7250, standard deviation of 0.44210, minimum value of -0.17 and maximum of 2.30. The independent variables; human capital (HUC) has a mean value of 2.9732 and a standard deviation of 2.78814, a minimum and maximum value of -2.54 and 9.82 respectively. Structural capital (STC) has a mean value of 0.5832, standard deviation of 1.07469, minimum value of -1.70 and maximum value of 6.02. Capital employed (CEM) has a mean value of 0.1748, standard deviation of 0.12625, minimum value of -0.03 and maximum of 0.51. Relational capital disclosure (RCD) has a mean value, standard deviation, minimum and maximum values of 0.3000, 0.46410, 0.00 and 1.00 respectively.

Table 1: Summary of Descriptive Statistics

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Dev	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Stat	Std. Err
EVA	40	-.17	2.30	.7250	.44210	3.222	.733
HUC	40	-2.54	9.82	2.9732	2.78814	-.139	.733
STC	40	-1.70	6.02	.5832	1.07469	17.154	.733
CEM	40	-.03	.51	.1748	.12625	-.017	.733
RCD	40	.00	1.00	.3000	.46410	-1.242	.733
N	40						

Source: Output of data analysis by author using SPSS (2026)

Table 2 below shows the 2-tailed correlation analysis of the variables at 5% (0.05) level of significance. This shows that enterprise value added (EVA) is negatively correlated with human capital (HUC), negatively correlated with structural capital (STC) while positively correlated with relational capital disclosure (RCD). Meanwhile, human capital (HUC) is positively correlated with structural capital (STC) but negatively correlated with enterprise value added (EVA) and relational capital disclosure (RCD).

Table 2: Summary of Coefficient of Correlation Correlations

	EVA	HUC	STC	RCD
EVA Pearson Correlation	1	-.255	-.252	.384
Sig. (2-tailed)		.112	.116	.015
N	40	40	40	40
HUC Pearson Correlation	-.255	1	.099	-.531
Sig. (2-tailed)	.112		.544	.000
N	40	40	40	40
STC Pearson Correlation	-.252	.099	1	.003
Sig. (2-tailed)	.116	.544		.985
N	40	40	40	40
RCD Pearson Correlation	.384	-.531	.003	1
Sig. (2-tailed)	.015	.000	.985	
N	40	40	40	40

Source: Output of data analysis by author using SPSS (2026)

The B column in table 3 below discusses the coefficient of the model. This indicates that a 68.9% increase in enterprise value added is as a result of a 0.8% decrease in human capital, 10.2% decrease in structural capital, 7.5% increase in capital employed and a 34.9% increase in relational capital disclosure. The cumulative adjusted R² (0.123) which is the multiple coefficient of determination gives the proportion or percentage of the total variation in the dependent variable as explained by the independent variables jointly. Hence, it signifies that 12.3% of the total variation in enterprise value added of the sample firms is caused by the proxies of intellectual capital disclosure. This is quite high so predictions from the regression equation are fairly reliable. It also means that 87.7% of the variation is still unexplained so adding other independent variables could improve the fit of the model. This indicated that the model is fit and the explanatory variable are properly selected, combined and used. The findings have theoretical, practical and regulatory significance. This significance represents the contributions of the study which are expected to benefit the existing body of knowledge within the accounting and finance research, regulators and providers of accounting services.

Table 3: Summary of Regression Result Model Summary

Multiple R	.461
R Square	.213
Adjusted R Square	.123
Std. Error of the Estimate	.414

Coefficients

	Unstandardized Coefficients		Beta	t	Sig.
	B	Std. Err			
(Constant)	.689	.156		4.417	.000
HUC	-.008	.032	-.048	-.237	.814
STC	-.102	.063	-.247	-1.615	.115
CEM	.075	.630	.021	.119	.906
RCD	.349	.169	.366	2.061	.047

Source: Output of data analysis by author using SPSS (2025)

Considering the significant effect of human capital on enterprise value added of listed real estate firms in Nigeria, the regression result in table 4 indicate that human capital has a negative and insignificance influence on enterprise value added of listed real estate firms in Nigeria. This was proved by the beta coefficient value of 0.048 and a t-value of -0.237 and a significance value 0.814 which is significance at 5% significance level. This leads to the acceptance of the null hypothesis and rejection of alternative hypothesis. Hence, it is concluded that human capital has no significant effect on enterprise value added of listed real estate companies in Nigeria.

Considering the significant effect of structural capital on enterprise value added of listed real estate firms in Nigeria, the regression result in table 4 indicate that structural capital has a negative and insignificance influence on enterprise value added of listed real estate firms in Nigeria. This was proved by the beta coefficient value of 0.247 and a t-value of -1.615 and a significance value 0.115 which is insignificance at 5% significance level. This leads to the acceptance of the null hypothesis and rejection of alternative hypothesis. Hence, it is concluded that structural capital has no significant effect on enterprise value added of listed real estate companies in Nigeria.

Considering the significant effect of capital employed on enterprise value added of listed real estate firms in Nigeria, the regression result in table 4 indicate that capital employed has a negative and insignificance influence on enterprise value added of listed real estate firms in Nigeria. This was proved by the beta coefficient value of 0.021 and a t-value of 0.119 and a

significance value 0.906 which is insignificance at 5% significance level. This leads to the acceptance of the null hypothesis and rejection of alternative hypothesis. Hence, it is concluded that capital employed has no significant effect on enterprise value added of listed real estate companies in Nigeria.

Considering the significant effect of relational capital disclosure on enterprise value added of listed real estate firms in Nigeria, the regression result in table 4 indicate that relational capital disclosure has a negative and insignificance influence on enterprise value added of listed real estate firms in Nigeria. This was proved by the beta coefficient value of 0.366 and a t-value of 2.061 and a significance value 0.047 which is insignificance at 5% significance level. This leads to the acceptance of the null hypothesis and rejection of alternative hypothesis. Hence, it is concluded that relational capital disclosure has no significant effect on enterprise value added of listed real estate companies in Nigeria.

V. DISCUSSION

Human capital and enterprise value added

The findings from the first hypothesis revealed that human capital has no significant effect on enterprise value added of listed real estate companies in Nigeria. This findings is in agreement with the findings of Inwang *et al.* (2024) whose findings of the study revealed that human capital disclosure has a significant negative effect on market value added. It is further supported by the study of Egolum (2021) whose study indicated that human capital efficiency exerts a negative insignificant influence on the net profit after tax margin and a positive significant impact on the gross profit margin. This result however disagrees with the study of Samwel *et al.* (2024) whose results depicted that human capital disclosure has a statistically significant effect on firm value.

Structural capital and enterprise value added

The findings from the second hypothesis revealed that structural capital has no significant effect on enterprise value added of listed real estate companies in Nigeria.

This result agrees with the findings of Arumona *et al.* (2022) whose results indicated that structural capital adversely affects the return on assets of publicly traded non-financial firms in Nigeria. The study therefore negates the result of Popoola (2022) whose results indicated that structural capital efficiency has a positive and significant impact on performance, thereby underscoring the importance of these two variables in influencing the financial performance of publicly listed oil and gas companies in Nigeria. It also disagrees with the study of Nguyen and Doan (2020) whose findings indicated a statistically significant positive effect of human capital efficiency, structural capital efficiency, and capital employed efficiency on a company's profitability.

Capital employed and enterprise value added

The findings from the third hypothesis revealed that capital employed has no significant effect on enterprise value added of listed real estate companies in Nigeria. This findings correlates with the findings of Haruna (2021) whose results indicated that the performance of multinational corporations in Nigeria was significantly and negatively influenced by the efficiency of capital employed. The study however disagrees with Adigizey *et al.* (2024) whose study indicated a significant impact of both capital employed and relational capital on return on assets. It also negates the study of Enekwe *et al.* (2022) whose results indicate that human capital efficiency positively and significantly influences the return on assets of publicly listed consumer goods firms in Nigeria, while structural capital efficiency and capital employed efficiency exert negative and insignificant effects.

Relational capital disclosure and enterprise value added

The findings from the forth hypothesis revealed that relational capital disclosure has no significant effect on enterprise value added of listed real estate companies in Nigeria. This is further strengthened by the position of Babatunde-Kareem *et al.* (2025) whose findings indicated that the disclosure of relational capital exerts a negative and insignificant impact on the valuation of listed financial services firms in Nigeria. This study however, disagrees with the

findings of Enrico *et al.* (2020) whose regression analysis revealed a positive and significant correlation between relational capital disclosure and financial performance. Furthermore, it negates the study of Corvino (2019) whose analysis revealed a positive and significant relationship between relational capital and firm performance.

VI. CONCLUSION

In today's modern business environment, one of the most important and influential elements in attaining improved financial performance for a company is the degree of effective use of knowledge and intelligence. The competitive business environment of today is dynamic and ever-changing. Survival is the answer because organizations that resist change risk being forced to cease to exist. Businesses need to look into every possibility that can give them a competitive edge if they want to survive. Businesses must genuinely use their workforce as a competitive weapon in order to gain a competitive advantage. Increasing worker productivity has become a key strategy to drive higher value for the companies. Through extensive human capital development programs, businesses aim to maximize their workforce in order to meet business objectives, but more importantly, for the organization's long-term survival and sustainability. In order to achieve this, businesses will have to commit resources to ensuring that staff members possess the competencies, knowledge, and abilities necessary to function well in a complex, fast changing environment. This study hereby concludes that human capital, structural capital, capital employed and relational capital disclosure has no significant effect on enterprise value added of listed real estate companies in Nigeria.

The following recommendations are hereby made:

- i. Firms in Nigeria should improve their human capital efficiency by engaging in employee training as well as financial and nonfinancial rewards.
- ii. Management of firms should increase capital employed and decrease structural capital investment in order to mitigate structural capital influence on cashflow performance.
- iii. Management should further encourage capital employed efficiency by enlarging its investment

bracket and increasing its staff strength to commensurate the workload of the firm.

- iv. In a bid to further enlarge the relational capital capacity of firm, employers should constantly review their staff strength and ability as well encourage them to improve on them when necessary.

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