



# Relational Capital Disclosure and Market Value of Selected Quoted Companies in Nigeria

Justin Iorakpen Iorun, Emmanuel Igbawase Abanyam, Michael Iorlaha\*

Department of Accounting, Benue State University, Makurdi, Nigeria

## Email address:

iorlahamichael5823@gmail.com (Michael Iorlaha)

\*Corresponding author

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**Abstract:** This paper examined the relationship between relational capital disclosure and market value of selected quoted companies in Nigeria. Specifically, the study examined the relationship between customer service, distribution channels, strategic partnerships disclosure and market value. *Ex-post facto* design was employed as data were extracted from published audited annual financial reports of 32 sampled listed companies on the Nigerian Exchange Group for a period of ten (10) years covering 2013-2022. A disclosure checklist was adapted and modified in collecting data for the independent variables (customer service, distribution channels and strategic partnerships disclosure). Summary statistics was conducted to estimate mean, deviation, minimum and maximum values of the collected data. The data collected were also subjected to multicollinearity test via correlational matrix. Regression post estimation was conducted with the aid of heteroskedasticity test. Panel data analysis was employed and multiple regression analysis was conducted in which random effect model was found most appropriate to test the formulated hypotheses. The study found that customer service disclosure has negative and insignificant relationship with market value, while distribution channels and strategic partnership disclosure were found to have positive significant effects on market value. Therefore, the study recommends amongst others that relevant stakeholders should give maximum attention to distribution channels and strategic partnerships disclosure and make them mandatory disclosure requirement, while caution be taken on customer service disclosure and its disclosure should be voluntary in nature.

**Keywords:** Relational Capital, Customer Service, Distribution Network, Strategic Partnerships, Market Value

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## 1. Introduction

The present business environment characterised by fierce competition has led to high engagement of non-financial properties by several business organisations in order to increase its market value and attract more investors. However, there is an observed increasing gap between market and book value of many quoted companies in Nigeria which has drawn attention towards investigating the missing value from financial statements [11]. It is worthy to understand that market value of a company is the amount of consideration or price offered on a company's asset in other words termed market capitalisation. This serves as the major indication of investor's perception concerning prospects of the organisation [9]. Its valuation is determined by investor's

assessment of the company's market indicators, such as share price, earnings per share, profit margin and market capitalization. It is imperative to note that an organisation's market value is dynamic in nature as its valuation is based on several factors ranging from physical to non-physical factors [1].

Consequently, for accurate assessment of an organisation's value, due consideration must be taken on both the physical and non-physical assets of the company, hence, relational capital. This in turn leads to a higher valuation and greater market value of the company [11]. Accordingly, relational capital which is comprised of customer service, distribution channels and strategic partnerships; is considered one of the hidden values that has escaped financial statements, despite the fact that most companies in Nigeria today, their major competitive advantage are obtained through this relational

capital [2].

However, the major aim of financial report which is to communicate to end users about the corporate value of an organisation for quality investment decision making and ensure adequate stewardship is found inadequate due to insufficient disclosure of the major capital (relational capital) engaged in day-to-day operations [1]. Thus, the traditional financial reporting framework in which information disclosed were based solely on physical assets has been considered insufficient in addressing the information needs of stakeholders as its value, examined by the relationship between financial data and corporate value. This has created information asymmetry between preparers and end users of financial statements which has begged for a more elaborate financial reporting system, to disclosure of relational capital in the financial reports has increased the competitiveness and bridged information asymmetry between book and market values of organization, as such, taking into cognisance relational capital disclosure in the annual reports. This system of information disclosure has the capacity of inducing and enhancing quality of stakeholder's investment decision. Thus, it is believed that the limitations of financial statements in precisely explaining market value reveal the fact that, nowadays, the source of economic value is the creation of relational capital and no longer the production of material goods [5].

Therefore, the influence of relational capital disclosure on company's market value cannot be over emphasised. Though most organisations in Nigeria give more attention in disclosing information on the physical assets of the company, ignoring or disclosing mildly information on their relational capital competences, thus creating information asymmetry to stakeholders as the actual worth or value of the company is not fully estimated. This in turn, affects stakeholder's investment decisions and subsequently the overall assessment of the actual market value of the reporting entity.

Consequently, the quality of stakeholder's investment decision has the capacity of positively influencing market value of the company. Healthy financial status of a company is reflected in its ability to efficiently and effectively fulfill the financial demands of the investors by assessing the company's financial achievements [2]. High market value of a company reveals how efficient and effective management of organisation employ its capital towards generating revenue for its stakeholders. These achievements can be measured using two broad indicators; accounting based indicators which comprised of returns on capital employed (ROCE), returns on assets (ROA), returns on equity (ROE), net profit margin (NPM), and market-based indicators which comprised of earnings per share (EPS), market to book value ratio, share price, dividend per share and Tobin's Quotients ratio. In carrying out investment decision, the stakeholders take critical evaluation of these indicators to guide their decision, and intellectual capital disclosure is considered useful for decision as it signals to the stakeholders about the potentials of the company which has effect on its future value of the organisation.

Disclosure of relational capital information is important in order to signal investors regarding affairs of the company in an intense globally competitive economic environment. Relational capital disclosure has great influence on the company's market value as this information builds confidence and trust in the mind of stakeholders about the company's performance [9]. More so, disclosure of information on relational capital in annual reports helps in making the capital markets provide more accurate market capitalisation of the disclosing company [5]. Disclosure on such information reduces information asymmetry in the annual report, thereby enabling easy estimation and forecasting of the actual market value of the organization [5].

However, companies whose management knows the benefit associated with relational capital disclosure encourage its inclusion in their annual report. Such as increasing awareness and confidence of investors in the core capabilities of the company and enables them to stay invested during moments of business crisis. Also, reducing information asymmetry, consequently, supporting a more realistic market valuation which in turn, leads to lower cost of capital and higher market value, which leads to reduced volatility in the company's aggregate stock in the capital market. Though, even when disclosed, it is only done sparingly mostly in Chairman's statement or Directors' report. The neglect of relational capital disclosure by most companies has reduced awareness and confidence of investors in the core capabilities of the company, thereby scaring investors away during moments of crisis on the company's survival. This also increased information asymmetry which leads to higher cost of capital and lower market value of the company. Also, only a few studies are conducted on relational capital such as; [4, 3, 14] in which all the studies are foreign based and limited to a single sector. This has informed the researcher's decision to carryout a study that is cross – sectoral, using Nigerian context with the aim of providing additional empirical evidence on the relationship between relational capital disclosure and market value of companies.

On this note, this paper investigates the relationship between relational capital disclosure and market value of selected quoted companies in Nigerian using customer service, distribution channels and strategic partnership disclosure as proxies for relational capital disclosure and Tobin's Q as proxy for market value. The Tobin's Q is deemed more appropriate proxy in this context because it seeks to determine the current and future value of the firm which is the major construct relational capital disclosure does to the company.

Consequently, this paper seeks to primarily investigate the effect of relational capital disclosure on market value of selected quoted companies in Nigerian from 2013 - 2022. However, the paper specifically seeks to investigate the relationship between customer service disclosure, distribution channels disclosure and strategic partnerships disclosure on market value of selected quoted companies in Nigeria.

The paper therefore formulates the following hypotheses;

Ho1: Customer service disclosure has no significant relationship with market value of selected quoted companies in Nigeria.

Ho2: Distribution channels disclosure has no significant relationship with market value of selected quoted companies in Nigeria.

Ho3: Strategic partnerships disclosure has no significant relationship with market value of selected quoted companies in Nigeria.

## 2. Conceptual Clarification

### *Relational Capital Disclosure (RCD)*

Relational capital disclosure is defined as those reports about an intellectual capital developed, maintained and nurtured by an organisation in order to sustain its external relationship that influences performance in the organisation's annual report. Thus, it is the strength and networking of an organisation through its customers and external factors that develop this important capital. Relational capital is sometimes called Customer capital [13].

Relational capital constitutes the value of organisational relationships. In general, it has been accepted that these relationships were mainly focused on parties that are external to the organisation and these include customers, suppliers, and shareholders. Nevertheless, it must be appreciated that the relationship of a company with its employees creates value. Therefore, for this strategic reason it is necessary to put them in mind. Therefore, to advance in the study of relational capital, it is convenient to differentiate between internal relational capital and external relational capital [6].

Internal relational capital includes the value of the strategic relationships created between the company and its employees. External relational capital represents the external perspective of relational capital and includes social relations of the company with principal agents; customers, suppliers, shareholders, government and communities [8]. Relational capital is the value of firm's relationships with people and organisations with which it conducts business. This capital includes relationships with external stakeholders, networks with suppliers, distributors, lobby organisations, partners, customer relationships (image building, loyalty, network partners and investors) and branding (attitude, preference, reputation, brand recognition) [10].

In this paper, relational capital refers to organisation's strategic relationships with both its internal and external environment which enhance effective and efficient operation of the organization. Relational capital entails organisation's relationships on customer services, distribution channels and partnerships with relevant stakeholders.

Therefore, due to the value these relational capital elements have on the overall performance of an organization, it is imperative for information on them be disclosed in the annual report in order to reduce information asymmetry. This in long-run leads to right valuation of the company's market value, thus increasing confidence of investors in the core capabilities of the company and enables them to stay invested

without fears of loss during moments of business crisis.

### *Elements of Relational Capital Disclosure*

The major elements of relational capital disclosure are;

- 1) Customer Service Disclosure (CSD): this entails disclosure of information on customer needs, customer loyalty customer retention, customer experience and satisfaction.
- 2) Distribution Channel Disclosure (DCD): it's disclosure of information on production, pricing, sales, purchasing, supply chain, stores, delivery, marketing and advertising.
- 3) Strategic Partnerships Disclosure (SPD): this entails disclosure of information on relationship with stakeholders, banks, suppliers, partnerships, consultants, government and media.

### *Market Value*

The market value of a company helps in assessing and evaluating if the company has fulfilled its economic goals. It is a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. It is the general measure of how well a company uses its resources to generate profits.

There are two major indicators for measuring value of an organisation; accounting-based measures, such as Return on Investment (ROI), Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM), and secondly are the market-based measures such as earnings per share (EPS), share price (SP), market capitalization (MC) and Tobin's Quotient (Tobin's Q) [7]. Data from the accounting indicators are based on past events which have already occurred (historical). The accounting indicators reflect a firm's legacy of the past and short-term performance. They are relevant in analysing past or historical value or financial health of an organisation to help predict the probable future value which is a matter of chance. The market-based indicators measure expectations about a firm's long-term ability to create value in the future [15]. This predicts the future outcome of an organisation's performance and therefore, is deemed more appropriate to adopt in measuring market value in the context of intellectual capital disclosure. This is because the major aim of intellectual capital disclosure is to ascertain the actual current market value of an organisation; as such, the study employed Tobin's Q in measuring market value. This indicator is adopted because it provides decision makers, both internal and external with relevant and reliable information on the firm's value in the nearest future [13].

### *Theoretical Framework*

This paper employed the signaling theory. This theory aimed at reducing information asymmetry between two parties. The theory was propounded by Spence in the year 1973. This theory is based on the assumption that information is not equally available to all parties at the same time, and that information asymmetry is the rule. The signaling theory states that corporate financial decisions disclosed in the annual reports are signals sent by the

company's manager to investors which guide their investment decisions, and absence of such disclosure creates information asymmetry to the investors. According to the signaling theory, there is a perceived information gap between management and shareholders [15]. As a result, shareholders might suspect that all the necessary information are not being released by the management. This would lead to information asymmetry between management and investors. As a result, investors would be hesitant to invest more in a firm because the information needed to take a decision is not available. The signaling theory addresses this information asymmetry existing between two parties when the source of the asymmetry is the information quality or the intention of the information. In this context, the quality of the information relates to the extent to which a party discloses its unobservable attributes in return for a premium from the other party [12].

The original idea of the signaling theory related to information asymmetry in the labour market and financial information. However, prior studies suggest that the disclosure of relational capital information in the reporting practice of a firm is a voluntary action embraced by companies that is beyond the narrow remit of the technical, economic and legal requirements of an entity [2]. Therefore, firms use relational capital information to signal the aspects that are overlooked by stakeholders, such as structures and processes, customers, suppliers and employee's competencies. It can be observed from the foregoing discussion that relational capital disclosure may be used as a signal that provides additional information to relevant stakeholders about the health of the organisation. In line with this theory, the study is of the view that there exists a positive relationship between relational capital disclosure and market value as its disclosure reduces information asymmetry, which is the primary assumption of the signaling theory.

#### *Empirical Review*

Enrico, et al. [4] investigated the relational side of intellectual capital: an empirical study on brand value evaluation and financial performance. The study made use of return on equity (ROE) and return on capital employed (ROCE) as performance indicators (dependent variables), while relational capital disclosure index (RCDI) was used as independent variable. Firm size and firm age were control variables used in the study. Ex-post facto research design was deployed as secondary data were gathered from a sample of 40 non-financial companies for a period of 14 years covering 2006-2019. Multiple regression analysis was conducted and the result found a positive and significant association between relational capital disclosure and financial performance. The study covered a good period and sample size; however, the result was based only on non-financial companies. Thus, a study which would cut across different sectors using Nigerian experience will be of much significance to Nigerian industries.

Corvino, et al [3] conducted a study on the moderating effect of firm size on relational capital and firm performance, evidence from Europe. The study used earnings per share

(EPS) as dependent variable, while 51 items relating to relational capital were used for relational capital index (RCI) representing independent variable and firm size and leverage were control variables for the study. Data for the study was extracted from annual reports of 73 companies in France, Germany, Italy and the UK for a period of 3 years covering 2011-2013. Regression analysis was conducted and the study found that relational capital (RC) has a positive and significant link with firm performance. The authors did well by sampling 73 companies from 4 different countries, however the latest period (2013) in which data was collected, compared to the time of study 2019 (5 years difference) is considered too wide, a lot of changes must have taken place within this period which would have strengthen the findings. As such there exists need for a study of this kind in the West African region covering a good period close to the study time.

Silvio, et al [14] conducted a study to investigate relational capital disclosure, corporate reporting and company performance: evidence from Europe. The study used total revenue (TREV), net operating cash flow (NOCF) and capital expenditure (CAEX) as performance (dependent) variables, while a content analysis based on 51 items inherent in the European relational capital (RC) framework was developed and used to collect data for RCD index which stood as the independent variable, with liquidity, leverage and firm size used as control variables. The research did a cross-country analysis on a sample of 80 companies for year 2013. Multiple regression analysis was conducted and the results showed that RCD supports statistically significant relationships with revenues, net operating cash flow and capital expenditures. In contrast, there is no statistically significant association with enterprise value. The study of [14] did quite an impressive work by carrying out a cross-country study, however the study covered only one year. It would have been better if the study covered a wider period of time.

#### *Gaps in empirical review*

A review of these studies has revealed differences in results on relational capital disclosure researches, they can be ascribed to differences in techniques, differences in time period examined, differences in sample size and differences in the country context. Also, only a few studies are conducted on relational capital such as [4, 3, 1, 14] in which all the studies are foreign based and limited to a single sector. This has informed the researcher's decision to carryout a study that is cross – sectoral, using Nigerian context with the aim of providing additional empirical evidence on the relationship between relational capital disclosure on market value of companies.

### **3. Methodology**

This study employed *ex-post facto* research design. This research design was adopted because it seeks to obtain relevant information regarding the study variables; Tobin's Q, human, structural and relational capital from already existing published audited annual financial reports of the sampled companies for the period under investigation.

The population of the study comprise of all the 151 companies listed on the main board of the Nigerian Exchange Group (NGX) as at 31<sup>st</sup> December, 2022 from all the eleven sectors, in which 32 companies were selected as sample size for the study using filtering technique as follows; (1) The company must be incorporated and listed on the Nigerian Exchange Group (NGX) before 2013. (2) The company's audited annual report must be published by the Nigerian Exchange Group (NGX) covering 2013 to 2022. (3) The company must disclose relevant information on relational capital components required for the study in their annual report.

#### Variables Definition and Measurement

The study employed two categories of variables in examining the set objectives which include; dependent and independent variables. Market value proxied by Tobin's Q served as dependent variable to test the formulated hypothesis. It is measured as; [(Market Value of common stock + Book Value of borrowings + Book Value of Current liabilities) / (Fixed Assets + Investment + Current Assets)] at the year end.

Relational Capital Disclosure Index served as the independent variable in this paper. This is proxied by; Customer Service Disclosure Index (CSDI), Distribution Channels Disclosure Index (DCDI) and Strategic Partnerships Disclosure Index (SPDI). Data relating to these

indices were obtained from the corporate annual reports and accounts of the sampled companies with the aid of checklist. The researcher assigned binary codes of 1s if an item included in the checklist is disclosed, and 0s for non-disclosure of an item contained in the checklist. The un-weighted disclosure index was employed in this study. This is because it gives equal weight to all the items involved, unlike the weighted index which is bias due to the subjectivity in setting the weight of each item. The disclosure index is derived by dividing the actual items disclosed by expected items considered. An index value close to 1 suggests a high level of disclosure quality, while a value close to 0 suggests a low level of disclosure quality.

Therefore, RCDI = CSDI, DCDI and SPDI.

$$\text{Disclosure Index} = \frac{\sum_{t=1}^m di}{\sum_{t=1}^n di} = \frac{\text{Actual disclosure}}{\text{Total possible disclosure}}$$

Where;

$\sum_{t=1}^m di$  = Actual disclosure

$\sum_{t=1}^n di$  = Total possible disclosure

m = number of items actually disclosed

n = maximum number of possible disclosures

This measure of disclosure index is in tandem with the study of [4, 3, 14].

**Table 1.** Summary of Variables and Measurement.

Variables	Proxy	Measurement	Source(s)
Dependent: Market Value	Tobin's Q	(Market Value of common stock + Book Value of borrowings + Book Value of Current liabilities) divide by (Fixed Assets + Investment + Current Assets) x 100	Enrico, Michele, Valentina and Niccolo (2020), Corvino, Caputo, Pironti, Doni and Martini (2019)
Independent	Relational Capital Disclosure (RCD)	CSDI Total Actual disclosure	Enrico, Michele, Valentina and Niccolo (2020), Corvino, Caputo, Pironti, Doni and Martini (2019)
		DCDI Total possible disclosure	
		SPDI	

Source: Researcher's Compilation (2023)

#### Model Specification

In an attempt to ascertain the relationship between relational capital disclosures on market value of selected quoted companies in Nigeria, the study adapted [13] models of two performance indicators, one independent variable and three control variables. Consequently, using single dependent variable Tobin's Q, proxy for market value, and a breakdown of Relational Capital Disclosure Index (RCDI) into three (3) independent variables (CSDI, DCDI and SPDI), the model is modified and presented as thus:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

Y = Response variable (Market Value)

X<sub>1</sub>–X<sub>3</sub>= Predictor variables (Intellectual Capital Disclosure)

β<sub>1</sub>–β<sub>3</sub> = beta coefficients

FP = RCDI

Thus;

$$FP = \text{Tobin's Q,}$$

$$RCD = CSDI + DCDI + SPDI$$

Functional Form;

$$\text{Tobin's Q} = f(\text{CSDI} + \text{DCDI} + \text{SPDI})$$

Equation Form;

$$\text{Tobin's Q}_{it} = \beta_0 + \beta_1 \text{CSDI}_{it} + \beta_2 \text{DCDI}_{it} + \beta_3 \text{SPDI}_{it} + \mu$$

Where;

Tobin's Q =Tobin's Quotients

CSDI = Customer Service Disclosure Index

DCDI = Distribution Channels Disclosure Index

SPDI = Strategic Partnerships Disclosure Index

it = company i in time t

β<sub>0</sub> = Constant term

β<sub>1</sub>–β<sub>3</sub> = Regression coefficients

μ = Error term

## 4. Data Analysis

#### Summary Statistics

This section presents the summary statistics of the data for the study. It shows the Mean, Standard deviation (SD),

Minimum (MIN) and Maximum (MAX) of data variables. The result of descriptive statistics is presented on Table 2.

**Table 2. Summary Statistics.**

Variables	Obs.	Mean	S.D.	Min	Max
Tobin's Q	320	1.6579	1.1621	0.1766	5.9344
CSDI	320	0.6808	0.1675	0.2	0.9333
DCDI	320	0.7094	0.0937	0.4667	0.8667
SPDI	320	0.6047	0.1778	0.15	0.85

Source: STATA 14.2 Output

Table 2 shows the summary statistics of the nature of data used in conducting analysis in this study. The data were collected from 32 sampled companies for 10 years resulting to 320 observations. The statistics revealed that Tobin's Q mean of the sampled companies during the period of study was 1.6579 with a standard deviation (SD) of 1.1621, which is lower than the mean. This indicates a low variation in the data for Tobin's Q among the sampled companies for the period under consideration. Also, the mean value of Tobin's Q of 1.6579 being above 1 indicates that the company is doing well and investors are sure of their return on investment. The Tobin's Q also has a minimum and maximum value of 0.1766 and 5.9344 respectively. The table also showed customer service disclosure Index (CSDI) with a mean 0.6808 and a deviation of 0.1675, which is lower than the mean. This shows that the data for CSDI has minimal variations among the sampled companies. The mean value on CSDI of 0.6808 being above 50% indicates that the company's disclosure on customer service is quite commendable. Also, CSDI has minimum and maximum values of 0.2 and 0.9333 respectively. The table furthermore showed that distribution channels disclosure Index (DCDI) on average stood at 0.7094 with a deviation of 0.0937 which is less than the mean. This indicates a low variation in DCDI among the sampled companies for the period under study. The mean value on DCDI of 0.7094 being above 50% indicates that the companies did well in disclosure on distribution channels. The statistics also showed DCDI with minimum and maximum values of 0.4667 and 0.8667 respectively. The statistics finally showed strategic partnerships disclosure Index (SPDI) with a mean of 0.6047 and SD of 0.1778. The deviation is lower than the mean indicating a low variation in SPDI among the sampled companies in the period under study. The mean value on SPDI of 0.6047 being above 50% indicates that the company's disclosure on strategic partnership is appreciative. Furthermore, the statistics revealed SPDI with minimum and maximum values of 0.15 and 0.85 respectively.

#### *Data Cleaning and Validity Checks*

To ensure that the data for this study is fit for the model, the study conducted data normality test as well as a test for multicollinearity and heteroscedasticity among explanatory variables. This section presents the result of correlation matrix, Variance Inflation Factor (VIF) test, and normality test, while test for heteroscedasticity is presented below;

#### *Multicollinearity Test*

Test for data multicollinearity was conducted using

correlation matrix and variance inflation factor as presented below;

#### *Correlation Matrix*

In order to check relationship existing between the study independent variables, the correlations statistics was employed to reveal the relationships existing among the study independent variables.

**Table 3. Correlation Matrix.**

	CSDI	DCDI	SPDI
CSDI	1.0000		
DCDI	0.3991	1.0000	
SPDI	0.4308	0.4744	1.0000

Source: STATA 14.2 Output

Table 3 presents the strength and type of relationship that exists between the study independent variables. A correlation coefficient which is above 0.75 is considered very high and could cause problems in the result. From table 3, all the variables are positively correlated indicating that they all move in the same direction. This means increases in both variables but at a low rate, seeing that correlation range between 0.4744 and 0.3991, below 5%. In sum, there exist no high correlations among the study variables as there exist no correlation that is above 75%. Therefore, the data is considered good for analysis.

#### *Heteroskedasticity Test*

This test was used to determine if the data have unequal variance/spread. For reliable estimators, heteroscedasticity is a requirement where equal variance is expected in disturbance terms and in dependent values. The Breusch-Pagan / Cook- Weisberg test for heteroscedasticity test was used for this study. If the test is significant at 5%, it suggests that heteroscedasticity is present in the data.

**Table 4. Breusch-pagan Test for Heteroskedasticity.**

Chi <sup>2</sup> (1)	Prob>chi2	Result	Remedy
4.40	0.0358	Significant	Robust Standard Error

Source: STATA 14.2 Output

From the model used in this study, the result is statistically significant at 5 percent with P-value of 0.0358 lesser than 0.05, indicating that there is problem of heteroscedasticity in the models. The significance of heteroscedasticity is ascribed to similarity in the binary codes of 0s and 1s used in collecting data for the independent variables; customer service disclosure, distribution channel disclosure and strategic partnership disclosure.

#### *Model Specification Test*

Two tests were conducted to help determine the model most suitable or appropriate for testing the formulated hypotheses. They include Hausman specification test and Lagrangian multiplier test as presented below;

#### *Hausman Specification Test for Fixed and Random Effect Models*

In order to choose the most appropriate model between fixed effect (FE) and random effect (RE), the Hausman test

was conducted. It basically tests whether the unique errors are correlated with the regressors, the null hypothesis is that they are not. The result is presented below;

**Table 5.** Hausman Fixed Random Test.

Chi <sup>2</sup> (3)	Prob>chi2	Decision
3.24	0.3557	RE Model Favoured

Source: STATA (Version 14.2) Output

The result of Hausman test revealed that Prob>chi2 value is 3.24, greater than threshold of 1 and P-Value of 0.3557 greater than 0.05 which suggest the use of Random Effect model is most appropriate for this study.

#### *Lagrangian Multiplier Test*

To decide between the RE regression and Ordinary Least Square (OLS) regression models, the Breusch and Pagan Lagrangian multiplier test was conducted as shown in the table below;

**Table 6.** Lagrangian Multiplier Test.

Chi <sup>2</sup> (01)	Prob>chi2	Decision
41.76	0.0000	RE Model Favoured

Source: STATA (Version 14.2) Output

The results showed a P-value of 0.0000 which is less than 0.05, suggesting that the Random Effect result is most appropriate to adopt in this study. That is, there is evidence of significant differences in variables across the sectors; therefore, a more generalised model is most fit for the study.

#### *Regression Result*

This section presents the regression results of dependent and independent variables.

**Table 7.** Regression Result for Tobin's Q (Random Effect Robust Model).

Variables	Coefficients	Z	p> z
CSDI	-0.0089	-1.37	0.170
DCDI	0.2397	3.06	0.002
SPDI	0.1920	2.93	0.003
-cons	1.5959	6.68	0.000
R <sup>2</sup>	0.4941		
F-Statistics	25.63		
Prob>F	0.0000		
Obs.	320		

Source: STATA (Version 14.2) Output

Table 7 showed the regression result of relational capital disclosure (RCD) and market value of selected companies listed in Nigerian Exchange Group (NGX). The regression was conducted using data collected from 32 selected companies for 10 years, which resulted to a total number of 320 observations. The result disclosed R-square of 0.4941, implying that the effect of the independent variables on the dependent variable employed in this study is 49.41%. This further indicates that the identified variables (CSD, DCD and SPD) account for 49.41 percent of variation in the dependent variable Tobin's Q used in this study, while the remaining 50.59 percent of the variation in the market value (Tobin's Q) is accounted for by other variables not included in the model.

This indicates that RCD has moderate effect on reporting entity's market value. The table also showed F- statistics of 25.63, which signifies that the overall equation is significant at 0.0000 percent (below 1%) level, indicating that the model is fit to be used for interpretation.

The result showed that customer service disclosure has a negative and insignificant relationship with Tobin's Q with a coefficient of -0.0089. This means that any increase in CSD by one unit will decrease Tobin's Q of the sampled companies by 0.89%. The results of table 7 further revealed that distribution channels disclosure has a positive relationship with Tobin's Q with a positive coefficient of 0.2397. This means that increase in DCD has the ability to influence either positively or negatively Tobin's Q of the sampled companies by 23.97%. The regression results finally disclosed that strategic partnership disclosure has a significant positive relationship with Tobin's Q of the sampled companies with a coefficient of 0.1920. This implies that SPD has 19.20% influence on Tobin's Q of the sampled companies. All things being equal, if the entire variables used in this study are held constant, relational capital disclosure has a significant and positive relationship with market value of the sampled companies with a coefficient of 1.5959, z-value of 6.68 and p-value of 0.0000. This entails that increase in relational capital disclosure will significantly increase market value of the sampled companies.

#### *Test of Hypotheses*

The formulated hypotheses for this study are tested based on the GLS robust regression results presented in Table 7. Test of these hypotheses is in accordance with the stated decision rule.

*Ho1: Customer service disclosure has no significant relationship with Tobin's Q of selected quoted companies in Nigeria.*

Table 7 shows the z-value and the associated p-value for the test of this hypothesis. The first hypothesis of this study was tested using the critical region of non-rejection of the null hypothesis set at z-statistics of  $\pm 1.96$  and 95% confidence interval. Given the calculated z-value of -1.37 which falls within the critical region of no rejection of the null hypothesis ( $\pm 1.96$ ) with *p-value* = 0.170 which is above 5% level of significance, the study accepted the first null hypothesis and concludes that customer service disclosure has no significant relationship with market value of selected companies listed in Nigerian Exchange Group (NGX).

*Ho2: Distribution channels disclosure has no significant relationship with Tobin's Q of selected quoted companies in Nigeria.*

Table 7 also shows the z-value and the associated p-value for the test of this hypothesis. The second hypothesis of this study was tested using the critical region of non-rejection of the null hypothesis set at z-statistics of  $\pm 1.96$  and 95% confidence interval. Given that the calculated value of z-value is 3.06 which falls outside the critical region of  $\pm 1.96$ , with *p-value* = 0.002 which is significant at 5%. This study failed to accept the second null hypothesis but rejects it and concludes that distribution channels disclosure has significant

relationship with market value of selected companies listed in Nigerian Exchange Group (NGX).

*Ho3: Strategic partnerships disclosure has no significant relationship with Tobin's Q of selected quoted companies in Nigeria.*

Table 7 shows the z-value and the associated p-value for the test of this hypothesis. The third hypothesis of this study was also tested using the critical region of non-rejection of the null hypothesis set at z-statistics of  $\pm 1.96$  and 95% confidence interval. Given that the calculated value of z-value = 2.93 which falls outside the critical region of  $\pm 1.96$ , with p-value = 0.003, lesser than 5% level of significance, this study fails to accept the third null hypothesis and concludes that strategic partnerships disclosure has significant effect on market value of selected companies listed in Nigerian Exchange Group (NGX).

#### *Discussion of Findings*

The findings drawn from the test of hypotheses are discussed in this section. The discussion of the findings is in accordance with the effect customer service disclosure, distribution channels disclosure and strategic partnerships disclosure have on Tobin's Q of selected companies in Nigeria.

#### *Customer service disclosure and market value*

The test of hypothesis one showed statistically that customer service disclosure has negative and insignificant effect on Tobin's Q with z-value of -1.37 and p-value of 0.170. This entails that CSD will lead to reduction in market value though not significantly. This could be due to the fact that information on customer service is sensitive in nature as they contain organisational strategy which gives them competitive advantage, in which if disclosed might negatively affect the company's market value. More so, disclosure of information on customer service such as; customer needs, customer loyalty customer retention, customer experience and satisfaction may cost the company more, thus reducing its market value. This entails that information on customer services are not essential in influencing investment, rather they incur costs which impact negatively on market value. This finding contradicts the findings of [4, 3, 14] whose studies found positive and significant relationship between relational capital disclosure and market value.

#### *Distribution channels disclosure and market value*

Test of hypothesis two revealed that distribution channels disclosure has a positive and significant effect on Tobin's Q. The test is statistically significant with a z-value of 3.06 and p-value of 0.002. This indicates that relevant stakeholder takes into cognisance information on distribution channels such as; production, pricing, sales, purchasing, supply chain, stores, delivery, marketing and advertising in making investment decision which affect positively the company's market value. This finding coincides with the study of [4, 3] and [14] who found significant positive association between relational capital disclosure and market value. Therefore, non-disclosure of information on distribution channels creates information asymmetry to the stakeholders.

#### *Strategic partnership disclosure and market value*

Result of the test of hypothesis three in this study showed a positive and significant relationship between strategic partnership disclosure and Tobin's Q. The test is statistically significant with a z-value of 2.93 and p-value of 0.003. This result also indicates that information on strategic partnerships plays key role in influencing market value of companies. Information on relationship with stakeholders, banks, suppliers, partnerships, consultants, government and media have great influence on investment decision. This finding entails that relational capital disclosure send signal to stakeholders about the company's relationships with its internal and external environment, which guides their investment decision. This finding supports the findings of [4, 3, 14] who also found in their studies that relational capital has a positive and significant effect on performance.

## **5. Conclusion and Recommendations**

The study examined effect of relational capital disclosure on market value of selected quoted companies in Nigeria. On the basis of the above findings, the study concludes as follows:

- 1) Customer service disclosure is an insignificant predictor of market value of the selected quoted companies in Nigeria as its disclosure leads to slight reduction in market value.
- 2) Distribution channels disclosure is statistically positive and a significant predictor of market value, indicating that it is an important disclosure requirement which influences and guides investment decisions of relevant stakeholders, thus affecting positively the company's market value.
- 3) Strategic partnerships disclosure is statistically a significant predictor of market value. This implies that relational capital disclosure influences market value of the reporting entity positively. This is also an indication that relational capital disclosure influence stakeholder's investment decision.

In line with the findings of this study, the following recommendations are made;

- 1) Customer service disclosure is found to have negative but insignificant effect on market value. It is therefore imperative for management to be courteous on CSD as such information might lead to decline in market value of the company. This may be ascribed to disclosure cost associated with it. However, management can make such disclosure when it perceives the need to use disclosure of such information for competitive advantage. Thus, CS disclosure should be voluntary in nature.
- 2) All the relevant stakeholders (internal and external) should give maximum attention to distribution channels and strategic partnerships disclosure for quality decisions as they are found to have significant effect on market value. This implies that they are key predictors of market value of the selected companies.



- 3) Based on the findings, relevant professional and regulatory bodies such as International Accounting Standard Board (IASB) and International Financial Reporting Standards (IFRS) should develop standards

to enforce mandatory disclosure of distribution channels and strategic partnerships disclosure due to the significant effect they have on market value of quoted companies.

## Appendix

**Table A1.** Relational Capital Disclosure Checklist.

Relational Capital Disclosure Items				
	Dimensions	Expected Items to be Disclosed	Disclo.	Undis.
1	Customer Service	Customer needs Customer loyalty Customer retention Customer experience Customer satisfaction Production Pricing Sales Purchasing		
2	Distribution Channels	Supply chain Stores Delivery Marketing Advertising Relationship with Banks Relationship with Suppliers		
3	Strategic Partnerships	Relationship with Partnerships Relationship with Consultants Relationship with Government Relationship with Media		

Source: Adapted and modified from Oziegbe (2023)

## References

- [1] Abeysekera, I. (2011). The relation of intellectual capital disclosure strategies and market value in two political settings. *Journal of Intellectual Capital*, 12 (2), 319-328.
- [2] Cabrita, M. & Bontis, N. (2008). Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology Management*, 4 (3), 212-237.
- [3] Corvino, A., Caputo, F., Pironti, M., Doni, F. & Martini, S. B. (2019). The moderating effect of firm size on relational capital and firm performance. *Journal of Intellectual Capital*, 12 (1), 125-135. DOI: 10.1108/jic-03-2019-0044.
- [4] Enrico L., Michele D. M., Valentina C. & Niccolo P. (2020). The relational side of intellectual capital: an empirical study on brand value evaluation and financial performance. *Journal of Intellectual Capital*, 7 (2), 112-119. DOI 10.1108/JIC-05-2020-0167.
- [5] Guthrie, U. D. (1999). Is the resource-based theory a useful perspective for strategic Management Research? Yes. *Academy of Management Review*, 2 (1), 41-56.
- [6] Kateb, I. (2012). An analysis of the determinants of voluntary structural capital disclosure by listed French companies. *International Journal of Business and Management*, 7 (11); 95-111.
- [7] Kinyua, A. L., Gakure, M. C., Gekere J. A. & Orwa, T. A. (2015). Factors influencing intellectual capital disclosure by Portuguese companies. *International Journal of Accounting and Financial Reporting*, 2 (2), 278-289.
- [8] Leyira, C. M., Clifford, O., Ofurum, O. C. & Ihendinihu, J. U. (2012). Firm's financial performance and human resource accounting disclosure of companies in Nigeria. *International Journal of Business and Management*, 7 (14); 67-81.
- [9] Mutalib, A., Hafiz M. R. & Hairul, A. A. (2017). Intellectual capital disclosure and information asymmetry; recent evidence from Nigerian economy. *International Journal of Economics, management and Accounting*, 24 (3), 112-119.
- [10] Oladele, P. O., Aribaba, F. O., Lateef, O. A. & Omobola, M. A. (2018). An empirical study of human capital accounting disclosure on financial performance of selected firms in Nigeria. *Journal of Accounting and Management*, 8 (2), 70-82.
- [11] Onyekwelu, J. & Ubesie, S. U. (2016). Intellectual capital disclosures: the search for a new paradigm in financial reporting by the knowledge sector of Indian economy. *Electronic Journal of Knowledge Management*, 7 (5), 575-582.
- [12] Rafinda, A. R., Pramuka, B. A. & Kusuma, P. D. (2012). The trend and variation of intellectual capital disclosure at bank industries in Europe. *Journal of economics, business and accountancy*, 16 (1), 105-118.
- [13] Rahman, M., Sobhan, R & Islam, S. (2019). Intellectual capital disclosure and Its determinants: empirical evidence from listed pharmaceutical and chemical industry of Bangladesh. *The Journal of Business Economics and Environmental Studies*, 9 (2), 35-46.

- [14] Silvio, B. M., Antonio C. F. & Doni A. R, (2016). Relational capital disclosure, corporate reporting and company performance: evidence from Europe. *Journal of Intellectual Capital*, 17 (2), 1-15. doi.org/10.1108/JIC-07-2015-0065.
- [15] Subhash, A. & Azim, M. (2014). Corporate reporting of intellectual capital: evidence from the Bangladeshi pharmaceutical sector. *Asian Review of Accounting*, 22 (2), 98-127.