# Corporate Governance Practices and Capital Structure Decisions: A Two-Sector Comparative Analysis

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*ABSTRACT*

*Globally, many corporate failures and scandals can be attributed to inherent poor corporate governance practices and inappropriate mix of capital structure within the organization, which has led to poor performance. Meanwhile, the capital structure with the optimum balance of debt and equity is a crucial decision made by the Board of Directors to make companies successful. Specifically, the study determines the strength and direction of the relationship between board characteristics and the leverage ratio of selected consumer and industrial sectors in Nigeria.*

*Secondary data were utilized for the study and sourced from the annual financial reports of the sampled thirteen consumer and industrial goods companies for the period of nine years between 2012 to 2020. The data were analyzed using both descriptive and inferential statistics to achieve the study objectives. Pairwise correlation and the granger causality test were used to determine the strength and direction of the relationship between board characteristics and the leverage ratio of selected companies in Nigeria.*

*Findings revealed that both board independence (BIND) and board gender diversity (BGD) have a positive relationship with leverage (LEVR) while other variables are negatively correlated with it for both companies. Further findings revealed that only corporate governance variables that have a significant impact on consumer goods firms' leverage also have a causal relationship with it whereas for industrial goods both the board size (BDSZ) and CEO pay slice (CEPS) have a uni-directional relationship that runs from leverage. It was concluded that the relationship between corporate governance practices and leverage can be sector-sensitive. It is therefore recommended that manufacturing companies in the country should put in place strict evaluation mechanisms to identify the most appropriate board characteristics that will help to select an optimum balance of capital structure at all times. Also, firm business leaders and policymakers should devise, and implement strategies and policies that are tailored to different sectors of the economy.*

*Keywords: Corporate governance, Capital structure, industrial sector, Consumer sector, Board characteristics and leverage.*

## 1. Introduction

Globally, many companies have failed in the past as a result of poor corporate governance practices and inappropriate mix of capital structure within the organization, which has led to poor performance. Meanwhile, the capital structure with the optimum balance of debt and equity is a crucial decision made by the Board of Directors to make companies successful. Corporate governance practices can be viewed as an atmosphere of trust, ethics, and moral principles and as a synergistic effort of all the constituent parts, such as stakeholders, including government, the general public, practitioners, service providers, and the corporate sector (David and Shahla, 2014).

Good governance and a fair ownership structure aid businesses to create a proper capital structure, which leads to higher income. Companies are under pressure from higher cash flows in the form of interest rates and the high cost of debt financing. As a result, it is widely believed that moderately balanced or slightly higher equity funding is safer for a company's growth and success (Syed and Waqas, 2018). Sound corporate governance principles are the foundation on which the faith of investors and lenders is built. Fundamentally, the perception and understanding of the field of corporate governance stem from the fact that there are potential problems associated with the separation of ownership and control (Usman, 2015).

Decisions made by the board as regards capital structure are very imperative for firm performance because it ultimately affects the wealth of shareholders and the organization as a whole. One of the several ways by which financial managers can maximize a firm financial performance is by reducing the cost of capital in its capital structure (Shah and Khan, 2007). Capital structure entails an appropriate mix of fund, debt, or equity firms used in financing its operations. It is the proportion of debt and equity used by firms in financing their operations (Alfred, 2007).

Fair equal use of both sources represents sound financial fitness that increases firm efficiency and thus has a ripple impact on the economy. Financial executives aim to find the best capital structure, both in the short and long term (Tong and Green, 2005). The role of improving corporate financial efficiency can be largely accomplished when financial managers recognised the determinants of their capital structure, i.e. the costs of each fund class. Debt investors provide contracts (bonds) with fixed interest payments in the future in exchange for their invested capital, while equity holders have retained earnings (internal equity provided by current shareholders) or the purchase of new shares (external equity provided by new shareholders) in exchange for future retained earnings of the company (Céspedes et al., 2010).).

Consequently, this paper is divided into five parts. Section one deals with the introduction discussed above while section two deals with concepts and literature review, section three describes the methodological part of the work, section four deals with results and discussion, and finally section five explains conclusions and recommendations.

### Statement of the problem

Low levels of firm performance in Nigeria could be due to a lack of sound corporate

governance, but if the firm embraced and introduced sound corporate governance but still perform poorly, could it be due to higher levels of debt financing? Hence, without adequate knowledge of sound mechanisms and principles to distinguish performance-driven values, the performance effects of corporate governance are simply incomplete without putting in place an appropriate financial structure. The relationship between board qualities and capital structure has an impact on management's decision to create a capital structure that maximizes company value (Priya and Nimalathasan, 2013). In today's consumer and industrial products companies, board qualities and capital structure are seen as major issues. Conducting a study on this problem will provide insight to the firm's managers and shareholders on how to address some of the capital structure difficulties.

Most studies in Nigeria emphasise that corporate governance practices have a positive impact on firm performance but the effect of corporate governance on capital structure and vice versa was neglected (Odunayo (2019); Adeolu and Afolabi (2019); Ofurum (2012); Ahmadu, Aminu, and Tukur (2015). Yinusa and Babalola (2012) studied the impact of corporate governance on capital structure decisions of ten (10) Nigerian food and beverage companies from 2000 to 2009. As a determinant of capital structure, the gross debt to total assets ratio (leverage) was used. Sebastian and Rapuluchukwu (2012) also looked at the effect of capital structure and liquidity on manufacturing company returns from 2002 to 2006, focusing on short-term debt, long-term debt, and overall debt without accounting for total debt to total equity funding.

Researchers have been concerned with means to address the challenges faced by companies as a result of poor corporate governance and a lot of research conducted with a view to proferring ways of resolving it. In Nigeria, for example, the study of Sanda, Mukailu and Garba (2005) looked at the entire firms listed on the floor of the Nigerian Stock Exchange (NSE) as of the year 2000. The recent study of Ibe,Ugwuanyi and Okanya (2017) equally looked at the entire listed firms on the NSE. To the best of the researcher's knowledge, no study has been conducted in this area using comparative analysis of the two sectors (Consumer and Industrial goods) in manufacturing companies. Based on sectoral indices released by the NSE, industrial goods and consumer goods sectors represent the sectors with the highest sectoral market capitalization as of December 31, 2020. Therefore, the need to investigate the relationship between corporate governance mechanisms and the capital structure of these sectors in Nigeria cannot be over-emphasised. Hence, this study aims to fill significant gaps on this issue, especially with the use of an econometric approach of granger causality tests, pairwise correlation, and inclusive of more appropriate explanatory and controlled variables to have a robust result.

**Research Hypothesis**
**Ho₁:** Corporate governance variables have no causal relationship with the leverage ratio of quoted consumer and industrial sectors in Nigeria
**2. Literature Review and Conceptual Explanation**
**2.1 Theoretical Review**
**Agency Theory**
      The theoretical concept on which this study is based is the theory of the agency, Free

Cashflow theory, and Trade-Off Theory of Capital Structure. The agency theory implies that the agent (in this case, the directors and managers) is likely to follow interests that may damage the principal or shareholder in the presence of information asymmetry. The principle was first applied to the relationship between executives and stock investors without clear consideration of other stakeholders involved in the company's well-being. Subsequent research efforts extended the reach of the scope to include not only the holders of equity but all other stakeholders, including workers, creditors, government, etc. (Owolabi, 2019)

Agency Theory explains how to create a contract between the principal and the agent that will result in the agent's best effort on behalf of the principal. The most critical aspect is that information is not distributed equally among managers and owners. This issue is referred to as information asymmetry, and it consists of two distinct but related elements: moral hazard and adverse selection. As it relates to contemporary organizations, agency theory's main goal is to reconcile the principal's and the agent's competing interests. One of the drawbacks of agency theory is that it restricts the principal to the owners and only pursues the interests of the owners. However, more stakeholders are interested in the contract, and this deficiency gave rise to the stakeholder theory, which is covered in more detail below.

**Stakeholder Theory**
The Stakeholder Theory argument is based on the assertion that maximizing wealth for shareholders does not increase wealth for society and all its members and that this is done only through a concern about balancing all stakeholder interests. Stakeholder theory asserts that several stakeholders are participating in the organization, each of whom is entitled to a reward for their efforts. According to this principle, the profit of a company is maximized when it is managed on behalf of all stakeholders and returns are distributed fairly among them in a manner that is agreeable to all. Unfortunately, there is no universally accepted method for dividing returns among all stakeholders, and stakeholder theory is severely lacking in suggestions in this regard. Nonetheless, this theory has some traction, and it is founded on the idea that running a company in this way results in the maximization of returns to shareholders as part of the overall process of maximising returns to all stakeholders.

**Trade-Off Theory of Capital Structure**
This is the enhancement of the MMT to include taxes and insolvency costs. Since interest expense is a tax-deductible expense, the trade-off principle of capital structure proposed that the optimum ratio of debt and equity in the company's capital structure be selected to reap the most benefits from the tax shield (Kraus and Litzenberger 2017). It is also useful in determining the best debt and equity funding levels to avoid financial difficulties for the business. According to analysts, the 1997 financial crisis was primarily caused by firms' blindly high leverage and unsustainable debt funding (Aldamen, Duncan, Kelly, McNamara and Nagel 2012). Managers have full freedom in selecting a suitable capital structure, taking into account the trade-off between interest tax shields and the cost of financial distress.

**Free Cash flow Theory**
(1986) proposed that leverage would serve as a control tool, reducing the agency issue and thereby increasing firm value by lowering free cash flow agency costs. If a company uses a

higher degree of leverage, the owners of that company would be unable to invest in non-profitable new ventures. As a result, new ventures may be unable to produce cash flows for the company, and managers may refuse to pay the fixed amount of interest or the principal when it is due. It can also result in an inability to generate profit in a given fiscal year, failing to pay dividends to firm shareholders.

Leverage may not only be able to minimize the agency costs of free cash flow, but it may also be able to improve the managers' performance. This is because the debt market can serve as a more efficient capital market monitor. Managers must also demonstrate their skills and efficiencies in operating the business to secure debt funding. Empirically, leverage proxied by bank lenders is a substitute monitoring mechanism, especially in weak corporate governance firms, but not in more successful merger environments.

## 2.2 Concept of Corporate Governance and Capital Structure Decisions
### Concept of Corporate Governance

Ioraver and Wilson (2013) emphasised that corporate governance is the systems and control mechanisms that govern the conduct and activities of an organization for the benefit of all interested parties. The corporate governance concept tells society that all large organizations are properly controlled and managed so that lenders and shareholders can feel free to invest in the organization. Stakeholders' interests can also be safeguarded and protected against mismanagement and corruption in any company that follows best corporate governance practices. According to previous research, corporate governance and agency theory provide a theoretical rationale for the correlation between corporate governance and firm success, as well as testable theories on the various corporate governance mechanisms in terms of improved financial performance.

### Historical Development of Corporate Governance in Nigeria

Since 1930, the Nigerian economy has suffered from the effects of bad corporate governance. Although the phrase "corporate governance" was never uttered, the destructive hammer of the economic murderer has been felt numerous times. The financial sector, particularly the banking sector, is the main driver of economic growth in any nation. All of the indigenous banks collapsed in the 1930s, except for the National Bank, making inadequate corporate governance very apparent (Owolabi, 2019).

Because of the dire circumstances in Nigeria, economic growth was geometrically slowed from year to year. Weak corporate governance was largely to blame for these issues. The Securities and Exchange Commission swiftly established a committee on corporate governance in June 2000 as a result of the aforementioned myriad difficulties. The first Code of Corporate Governance and Best Practices was the result of the committee's 2002 report submissions. Other codes of governance conduct exist, including the:

i. 2008 Central Bank of Nigeria code of corporate conduct for licensed pension operators.
ii. 2009 Nigerian insurance sector code of corporate governance
iii. 2011 Nigerian Corporate Governance Code.

A steering committee for the 2015 National Code of Corporate Governance has just been established. This commission was established on January 17, 2013, and it has created the

Exposure draft for comments and discussion. It is equally crucial for your institute to contribute to this conversation, which will undoubtedly influence the economic course of this nation (2019)

## Corporate Governance Mechanisms
### Board Size
Board size which uses the number of directors as a proxy is an important yardstick in corporate governance. Previous studies on board size show that there exists both a positive and negative relationship between board size and firm value. Mak and Yuanto (2003) found that firm value is highest when board sizes are small. Sanda *et al.* (2005), on the other hand, discovered that small board size, rather than large board size, is positively associated with firm financial efficiency.

### Block holdings or ownership concentration
The next important element of governance mechanisms examined is ownership concentration, which refers to the proportion of a firm's shares owned by a given number of the largest shareholders. A high concentration of shares puts more pressure on managers to act in ways that maximize shareholder value. According to Shleifer and Vishny (2017), an increase in ownership concentration would be correlated with an increase in firm value at low levels of concentration, but the relationship may be negative above a certain level of concentration.

### Audit Committee
The principle behind audit committees varies according to the objectives, functions, and responsibilities assigned to them. According to Arens *et al.* (2009), an audit committee is a group of people chosen from the board of directors who are responsible for maintaining the auditor's independence. Furthermore, according to Al-Thuneibat (2006), it is a committee made up of non-executive directors in the company. The audit committee was formed with the primary aim of improving the quality of auditing and questioning of the board of directors.

### CEO Pay Slice
According to Bebchuk, Cremers, and Peyer (2011), the CEO's pay slice (CEOP) reflects the CEO's relative importance in terms of skills, contribution, and power. This is a good proxy for the CEO's relative importance in the top management team. CEOP is described by Bebchuk et al.(2011) as the CEO's total compensation as a percentage of the combined total compensation of the company's top five executives (including the CEO). Salary, bonus, other annual pay, long-term retention payouts, the total value of restricted stock awarded that year, Black-Scholes value of stock options granted that year, and all other total compensation are included in total compensation.

Previous studies have used a variety of power metrics, including the number of titles held by the CEO and CEO duality, in which one person serves as both CEO and chairman of the board (Adams et al. 2007; Harrison, Torres, and Kukalis 1988). For two reasons, CEPS is the better choice. First, since CEOP is likely to be the product of several visible and unnoticed aspects of the organization's top executives and management model, it allows for the capture of dimensions of the CEO's role in the top executive team that is not captured by organized and easily observed variables, such as whether the CEO often chairs the board of directors. Second,

since CEOP is based on pay data from managers who all work for the same company, it keeps track of any company-specific factors that affect the total amount of compensation paid to the company's top executives.

## Capital Structure of a Firm

Capital structure refers to a mix of debt and equity capital owned by a business with various sources of funds, particularly long-term funds or capital (Phansamon and Yalçın 2012). Margaritis and Psillaki, 2010; Rocca and Rocca 2007) argued that capital structure is fundamentally a mechanism that illustrates how equity and debt are used to finance the operations of companies. It could be argued that seeking an optimal capital structure or an optimal combination of debt and equity is critical because it maximizes the company's value. In this respect, to strike a balance between risks and returns to optimize the company's value, the capital structure can be interpreted in terms of the target capital structure.

## Leverage Ratio

These are the ratios that show the capital structure of a business entity. The leverage ratio shows the mixture of the business capital between equity (Proprietary capital) and debts (long-term liabilities). This provides information on the degree of a company's fixed financial obligations and its ability to satisfy these obligations. The main long-term solvency ratios are capital gearing ratio (CGR), debt-equity ratio (DER), and interest cover (IRC) (ICAN 2019)

## Debt –Equity Ratio (DER)

This measures the relationship that debt has to the equity capital of an entity. It is calculated as

$$Debt - Equity\ Ratio = \frac{\text{Debt}}{\text{Equity}}$$

## Corporate Governance and Capital Structure

The decision on the capital structure is crucial, as such a decision directly affects the efficiency of an organization. One of the main elements of the firms' financial plan is the effective selection and use of resources such as capital (Vehnampy and Aloy-Niresh 2012). Corporate governance was described by Shleifer and Vishny (2017) as a way in which finance suppliers ensure a return on their investment. Also, Abdullah and Valentine (2009) and Mulbert (2010) saw corporate governance as concerned with the institution's intrinsic existence, intent, dignity, and identification, with a primary emphasis on the continuity and judicial component of the entity's relevance.

A proper capital structure is not only necessary for an organization to maximize the interests of all stakeholders, but it is also necessary for the organization to compete successfully and efficiently in its operating environment (Li and Simerly 1999). A poor capital structure option would not only put the company in financial trouble but would also lead to insolvency (Eriotis *et al.* 2007). After considering the above, the required capital structure determined by sound corporate governance practices will still lead to better performance remains inconclusive in the previous literature.

## 2.3 Review of Empirical studies

In developed countries, several works were carried out on corporate governance, capital structure, and firm performance by different researchers. PeiZhi and Ramzan (2020) stressed that the capital structure with the optimum balance of debt and equity is the primary decision made by the board of directors to make organizations profitable. His research involves both time-variant and time-invariant variables, and these variables often have the issue of an outlier. The

study is primarily interested in the impact of corporate governance and capital structure on companies' market-oriented and accounting-based results, particularly concerning outliers. For the period 2013 to 2017, For 45 publicly traded Chinese companies, M-estimators and S-estimators of robust regression were used to test hypotheses. The findings show that companies with a board of directors, independent directors, institutional investors, an audit committee, and female directors have a higher chance of succeeding.

Furthermore, the study discovered that while the leverage ratio improves accounting efficiency, it harms the stock prices of publicly traded firms. The study was done in China not in Nigeria with an inadequate number of periods. Therefore, the result and conclusion are not relevant in Nigeria. Syed and Waqas (2018) also looked at the capital structure and corporate governance of Pakistan's listed cement industry, as well as the significant components that affect the budget performance of the sector. The Pooled Regression Model was used to test the hypothesis using auxiliary data from audited financial statements of 10 listed cement companies on the Pakistan Stock Exchange (PSX) from 2007 to 2016. The research used three dependent variables to assess the company's performance such as return on assets, return on equity, and net profit margin, as well as four independent variables to assess the structure of corporate governance and capital (Board Size, Audit Committee, LTDR and STDR).

Adeolu and Afolabi (2019) used a regression model to analyze publicly available data for a sample of ten Nigerian listed companies to determine the effect of corporate governance on results. The research used a sample of 64 publicly traded non-financial companies from 2002 to 2006 to capture the effect of the New Code of Corporate Governance, which was published in 2003, on previous findings. Estimates based on panel regression show that board size, audit committee independence, and ownership concentration help results. Higher independent directors and directors' portion of shares unexpectedly dampen performance, while firms vesting both the roles of CEOs and chairs in the same individual perform better

Corporate governance and capital structure decisions were examined for several years, however, researchers have observed various outcomes in different contexts. There is also no particular outcome that can be generalized on the scale of the relationship between the corporate governance practices and capital structure in Nigeria using sectorial comparison of two different sectors, so this new research is constant to gain a more complete understanding of the nature of the relationship between corporate governance practices and capital structure. It is therefore very important to see the relationship in Nigeria as a developing economy

Further study was specifically carried out in Nigeria on manufacturing company sectors by Oke, Saheed, and Quadri (2019) using the ordinary least square method and Muritala and Oguntade (2013) using Panel Least Square (PLS) regression and the annual data of five firms for a period of eleven years (2002-2012) were employed with one or two dependent variables. Their studies have methodological inadequacies of not taking into cognizance of adequate sample size. To adjust and control for the relationship that may exist, granger causality and correlation analysis are employed in this study which creates an important gap.

## 3. Methodology

Nigeria, the largest country in Africa and accounts for more than 47% of the West African population was used as the study area (Wikipedia, 2020). The main focus of this study is Nigeria's manufacturing companies being a driving force of the Nigerian economy with emphasis on consumer and industrial goods companies. The two sectors were chosen because the

industrial goods industry is largely concerned with the production of goods. Meanwhile, the consumer goods business produces finished goods that are sold to the general population. Because these two industries are so closely linked, demand for industrial goods is sometimes influenced by demand for the consumer goods they help generate. As a result, a thorough understanding of the demand for consumer goods in the Nigerian market is required to completely comprehend the need for industrial goods and possibilities (Nifemi, 2018). The study employed six key corporate governance variables (board independence, board size, equity ownership, CEO pay slice, board gender diversity, and audit committee size), and a capital structure variable (leverage ratio).

### Model Specification
**Model 1: Strenght and direction of the relationship between board characteristics** and Leverage ratio

$LVR_{it} = f(BIND_t, BDSZ_t, INS_t, EQO_t, ADCZ_t, LS_t, BGD_t)$...........................................(1)

$LVR_{it} = \beta_0 + \beta_1 BIND_i + \beta_2 BDSZ_i + \beta_3 CEPS_{it} + \beta_4 EQO_t + \beta_5 ADCZ_t + \beta_6 BGD_t + \beta_7 lnTA_{it} + \varepsilon_{it}$_____(1)

Splitting it into two sectors in the analysis, the equation 1a and 1b are:

$LVR_{cs} = \beta_0 + \beta_1 BIND_i + \beta_2 BDSZ_i + \beta_3 CEPS_{it} + \beta_4 EQO_t + \beta_5 ADCZ_t + \beta_6 BGD_t + \beta_7 TA_{it} + \varepsilon_{it}$_____(1a)

$LVR_{is} = \beta_0 + \beta_1 BIND_i + \beta_2 BDSZ_i + \beta_3 CEPS_{it} + \beta_4 EQO_t + \beta_5 ADCZ_t + \beta_6 BGD_t + \beta_7 lnTA_{it} + \varepsilon_{it}$_____(1b)

**Where:**

**Dependent variables**

$LVR_{cs} = Leverage\ ratio\ of\ selcted\ firms\ in\ the\ consumer\ sector$

$LVR_{is} = Leverage\ ratio\ of\ selcted\ firms\ in\ the\ industial\ sector$

**Independent variables**

BIND= Independent Director

BDSZ = Board size

BGD = Board Gender Diversity

EQO = Equity ownership

CEPS = CEO pay slice

ADCZ = Size of Audit Committee

LnTA= Natural logarithms of total assets

$ei_t$, = Stochastic error Term

$\beta_1 - \beta_7 = regression\ parameters$

i=individual firms

t=time

**The a priori expectation is such that:**

$BINDt, BDSZ_t, BDG_t, EQO_t, ADCZ_t, Ln\ TA, CEPS_t > 0$. A positive relationship is expected between explanatory variables ( $BINDt, BDSZ_t, BDG_t, EQO_t, ADCZ_t, Ln\ TA, CEPS_t$) and the dependent variables ($LVR_t$,). The correlation coefficient ($\beta_o$) will help to explain the various levels of association between the independent variables.

**Table 1: Measurement of Variables**

| Variables | Definitions | Previous Studies |
|-----------|-------------|------------------|

| Board size (BDSZ) | Total number of directors that are on board | Haque, Deegan and Inglis (2016) |
|---|---|---|
| Equity ownership (EQO) | The percentage of equity ownership held by the management who run the operations of the firm | Ahmadi et al. (2018) |
| Audit Committee size (ADCZ) | Total number of members of the Audit Committee | Werder, Talaulicar and Kolat (2005). |
| Board Independence (BIND) | Board Independence is measured as the ratio of non-executive directors on the Board divided by the total directors on the Board | Nadeem, Suleman, and Ahmed (2019) |
| Board gender diversity | Percentage of Female Executives | Low et al. (2015), Haque, Deegan and Inglis (2016) |
| CEO pay slice (CEPS) | Fraction of the total compensation to the group of top-five executives that is received by the Chief executive officer (CEO) | Xiangwei (2017) |
| Leverage Ratio (LGR) | This is the ratio of total debt to total equity capital | Mohammad, Mohammed and Mosharrof (2019) |
| Firm size | Natural logarithms of total Assets | Byoun et al. (2016) |

**Source:** Author's compilation, 2021

## 4. Results and Discussions
### 4.1 Unit Root Tests

Table 2 and Table 3 report all the variables used in the study for consumer and industrial goods companies and the first row of the table depicted different panel unit root test results which are given at the level as well as the first difference against each variable. The results indicated that most of the variables are stationary at the level and other variables are stationary at first difference i.e I(1)

**Table 2: Unit Root Test for Consumer Goods Companies**

| Variables | IPS | | FADF | | LLC | |
|---|---|---|---|---|---|---|
| | I(0) | I(I) | I(0) | I(I) | I(0) | I(I) |
| LEVR | -3.58 | -6.50 | -6.89 | -11.65 | 108.19 | 220.95 |
| BDSZ | 2.87 | -3.96 | 0.41 | -5.37 | 20.29 | 195.35 |
| BIND | -2.61 | -7.78 | -5.98 | -12.04 | 64.15 | 144.91 |
| BGD | -2.01 | -3.43 | -5.57 | -6.86 | 62.31 | 150.09 |
| CEPS | 1.50 | -3.28 | 0.72 | -6.07 | 46.94 | 223.48 |
| ADCZ | 1.22 | -4.44 | 0.18 | -6.10 | 49.94 | 155.91 |
| EQO | -1.02 | -1.54 | -3.91 | -3.80 | 46.56 | 140.26 |
| LN_TA | -1.26 | -3.48 | -3.82 | -6.47 | 77.40 | 179.17 |

*Source: Computed by researcher using data extracted from annual reports of consumer goods companies (2022)*

**Table 3: Unit Root Test for Industrial Goods Companies**

| Variables | IPS | | FADF | | LLC | |
|---|---|---|---|---|---|---|
| | I(0) | I(I) | I(0) | I(I) | I(0) | I(I) |
| LEVR | -2.03 | -2.08 | 77.92 | 51.89 | -10.13 | -18.52 |
| BDSZ | -1.37 | -4.94 | 40.18 | 102.2 | -8.24 | -13.81 |
| BIND | -4.94 | -5.09 | 2.36 | 11.89 | -3.24 | -9.95 |
| BGD | 1.22 | -8.96 | 16.45 | 35.83 | -6.21 | -14.36 |
| CEPS | -3.27 | -6.79 | 73.87 | 173.23 | -11.00 | -16.20 |
| ADCZ | 4.38 | -3.67 | 104.40 | 66.63 | -8.95 | -15.24 |
| EQO | -1.02 | -1.54 | 31.72 | 43.07 | -6.14 | -11.57 |
| LN_TA | -6.54 | 2.68 | 19.36 | 52.64 | -11.57 | -19.57 |

*Source: Computed by researcher using data extracted from annual reports of Industrial goods companies (2022)*

### 4.5 Determination of the Strength and Direction of the relationship between corporate governance and Leverage

**Correlation Analysis**

In an attempt to determine the strength of the relationship between two or more variables for consumer goods, correlation analysis is mostly used. The result of the analysis presented in Table 4 revealed the simultaneous direction of movement between pairs of variables. Table 4 presents six components of corporate governance which include board size, board independence, board gender diversity, CEO pay slice, audit committee size, and equity ownership. Though two important corporate governance variables, board gender diversity and board independence have a positive relationship with leverage while it correlated negatively with board size, CEO pay slice, audit committee size and equity ownership, and total assets. Though the reported statistic does not connote a causal-effect relationship, however, the statistics revealed how the pooled observations of variables move together over time.

The reported correlation between leverage ratio and other variables employed in the study shows that leverage ratio has a weak correlation with all the variables as the reported statistics connote a very weak measure of correlation. The reported coefficients indicated that there is a weak positive correlation between leverage ratio and variables like board independence, board gender diversity, and equity ownership, while the correlation between leverage ratio and variables like board size, audit committee size, and equity ownership is negative though weak. Notably, the reported correlation coefficients revealed that there is a weak correlation between all the explanatory variables though direction differs across pairs. However, the establishment of the correlation between the leverage ratio and corporate governance variables for consumer goods does not in any sense connote the direction and magnitude of the causal-effect relationship that exists between them, hence the reported coefficient is only meant to give an overview of the direction of movement of each pair of variables employed in the study.

The strength of the relationship between corporate governance practices and financial leverage differs between consumer goods and industrial goods industries. Though two important corporate governance variables, board gender diversity and board independence have a positive relationship with leverage while they correlated negatively with board size, CEO pay slice, audit committee size and equity ownership, and total assets for industrial goods

In the consumer industry, Table 4 revealed that none of the variables has a positive and significant relationship with capital structure, and board size and board gender diversity have a

positive but not significant relationship with leverage that is, larger board size positively impacts the capital structure of consumer firms. A non-significant relationship between LEVR and BDSZ, BGD, CEPS, ADCZ, EQO, and LN_TA was found; that is, leverage has less impact on the capital structure of consumer goods companies. In the industrial firms, a non-significant relationship between LEVR and BGD, CEPS, ADCZ, EQO, and LN_TA was found; and two of the board characteristics variables have a significant and positive relationship with leverage, that is, larger board size has positively impacted the leverage value of industrial firms. For the two companies, the results of the independent directors reveal that the more independent the directors are, the cheaper the cost of debt financing is because they have more strict control over the management team when it comes to debt financing than directors with less independence.

**Table 4: Pearson Correlation Matrix for Consumer Goods**

|  | LEVR | BDSZ | BIND | BGD | CEPS | ADCZ | EQO | IN_TA |
|---|---|---|---|---|---|---|---|---|
| **LEVR** | 1.0000 |  |  |  |  |  |  |  |
| **BDSZ** | 0.0692 | 1.0000 |  |  |  |  |  |  |
|  | 0.4341 |  |  |  |  |  |  |  |
| **BIND** | -0.4131* | 0.2542* | 1.0000 |  |  |  |  |  |
|  | 0.0000 | 0.0035 |  |  |  |  |  |  |
| **BGD** | 0.0453 | -0.1425 | 0.0329 | 1.0000 |  |  |  |  |
|  | 0.6084 | 0.1058 | 0.7100 |  |  |  |  |  |
| **CEPS** | -0.0674 | 0.0609 | 0.2996* | 0.0049 | 1.0000 |  |  |  |
|  | 0.4463 | 0.4914 | 0.0005 | 0.9556 |  |  |  |  |
| **ADCZ** | -0.1019 | 0.4467 | 0.0318 | 0.0869 | -0.2335 | 1.0000 |  |  |
|  | 0.2489 | 0.9212 | 0.1290 | 0.3355 | 0.0075 |  |  |  |
| **EQO** | -0.1147 | 0.0119 | 0.1436 | -0.0419 | 0.2909 | -0.1668 | 1.0000 |  |
|  | 0.1939 | 0.8935 | 0.1031 | 0.6357 | 0.0008 | 0.0579 |  |  |
| **IN_TA** | 0.1494 | -0.0775 | 0.1045 | -0.1048 | 0.0306 | -0.0679 | 0.0560 | 1.0000 |
|  | 0.0898 | 0.3807 | 0.2369 | 0.2356 | 0.7295 | 0.4427 | 0.5272 |  |

**Source:** *Author's Computation (2022)*

**Table 5: Pearson Correlation Matrix for Industrial Goods**

|  | LEVR | BDSZ | BIND | BGD | CEPS | ADCZ | EQO | LN_TA |
|---|---|---|---|---|---|---|---|---|
| **LEVR** | 1.0000 |  |  |  |  |  |  |  |
| **BDSZ** | 0.2134* | 1.0000 |  |  |  |  |  |  |
|  | 0.0148 |  |  |  |  |  |  |  |
| **BIND** | -0.3725* | 0.3102* | 1.0000 |  |  |  |  |  |
|  | 0.0000 | 0.0003 |  |  |  |  |  |  |
| **BGD** | 0.0737 | 0.0327 | 0.2810* | 1.0000 |  |  |  |  |
|  | 0.4044 | 0.7116 | 0.0012 |  |  |  |  |  |
| **CEPS** | -0.1090 | -0.0293 | -0.1861 | -0.1118 | 1.0000 |  |  |  |
|  | 0.2171 | 0.7410 | 0.0340 | 0.2054 |  |  |  |  |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **ADCZ** | -0.2209 | -0.2124 | -0.3325* | -0.1915 | 0.1787* | 1.0000 | | |
| | 0.0116 | 0.0152 | 0.0001 | 0.0291 | 0.0419 | | | |
| **EQO** | -0.0546 | 0.1320 | -0.1462 | -0.3522* | 0.1663 | -0.1053 | 1.0000 | |
| | 0.5375 | 0.1344 | 0.0970 | 0.0000 | 0.0586 | 0.2333 | | |
| **IN_TA** | 0.0975 | 0.1708 | 0.1604 | -0.0781 | -0.0942 | -0.1294 | 0.0531 | 1.0000 |
| | 0.2696 | 0.0520 | 0.0682 | 0.3771 | 0.2862 | 0.1424 | 0.5485 | |

**Source:** *Author's Computation (2022)*

**Granger Causality Test**

In the quest to determine the direction of causality, Table 6 showed that four corporate governance variables have a significant relationship with leverage which in turn also have a causal link with it. Board size is uni-directional with leverage for both companies. Also, CEPS has a Bi-directional relationship with leverage for both companies. Finally, EQO and LN_TA have a uni-directional relationship with leverage for only consumer goods companies but no causal link for industrial goods companies

| Variables | Consumer goods companies | | | Industrial goods companies | | |
|---|---|---|---|---|---|---|
| | F-Statistic | Prob. | Conclusion | F-Statistic | Prob. | Conclusion |
| BDSZ does not Granger Cause LEVR | 4.5373 | 0.0353 | Unidirectional relationship | 1.2212 | 0.0272 | Unidirectional relationship |
| LEVR does not Granger Cause BDSZ | 0.2403 | 0.6249 | | 3.039823 | 0.0839 | |
| BIND does not Granger Cause LEVR | 1.07174 | 0.3027 | No causal relationship | 0.14924 | 0.7000 | No causal relationship |
| LEVR does not Granger Cause BIND | 0.09522 | 0.7582 | | 0.07975 | 0.7782 | |
| BGD does not Granger Cause LEVR | 0.03064 | 0.8614 | No causal relationship | 0.92431 | 0.3384 | No causal relationship |
| LEVR does not Granger Cause BGD | 1.62183 | 0.2054 | | 1.04975 | 0.3077 | |
| CEPS does not Granger Cause LEVR | 0.11854 | 0.0313 | Bi-directional relationship | 0.01151 | 0.0148 | Bi-directional relationship |
| LEVR does not Granger Cause CEPS | 0.28395 | 0.0252 | | 0.16648 | 0.0440 | |
| ADCZ does not Granger Cause LEVR | 0.23520 | 0.6286 | No causal relationship | 0.44090 | 0.5080 | No causal relationship |
| LEVR does not Granger Cause ADCZ | 0.02942 | 0.8641 | | 0.00420 | 0.9484 | |
| EQO does not Granger Cause LEVR | 2.54528 | 0.0134 | Unidirectional relationship | 0.00186 | 0.9657 | No causal relationship |
| LEVR does not Granger Cause EQO | 0.96299 | 0.3285 | | 0.65272 | 0.4208 | |
| LN_TA does not Granger Cause LEVR | 0.26577 | 0.0072 | Bi-directional relationship | 0.29519 | 0.5880 | No causal relationship |
| LEVR does not Granger Cause LN_TA | 5.35046 | 0.0225 | | 0.29988 | 0.5850 | |

**Table 6: Granger Causality Test**

**Source:** *Author's Computation (2022)*

**5. Conclusion and Recommendations**

From the discoveries made in the study, comparing the findings of the causality test for consumer and industrial firms reveals that only the corporate governance variables that have a significant impact on consumer goods firms' return on assets also have a causal relationship with it. That is board size (uni-directional); CEO pay slice (bi-directional to leverage) and equity ownership (uni-directional from leverage). In industrial goods companies, board size has uni-directional causality to leverage) while and CEO pay slice also has a uni-directional relationship that runs from leverage. This paper showed that the relationship between corporate governance practices and leverage can be sector-sensitive. Corporate governance variables affect leverage more in the consumer goods sector than in the industrial goods sector. This emphasizes the necessity for firm business leaders and policymakers to devise and implement strategies and

policies that are tailored to different sectors of the economy.

Moreover, it was also discovered that only board independence has a positive and significant relationship with capital structure, and board size has a positive relationship but not a significant relationship with leverage that is, a larger board size positively impacts the capital structure of consumer firms. A non-significant relationship between LEVR and BDSZ, BGD, CEPS, ADCZ, EQO, and LN_TA was found; that is, leverage has no impact on the capital structure of consumer goods companies' firms. In the industrial firms, a non-significant relationship between LEVR and BGD, CEPS, ADCZ, EQO, and LN_TA was found; and two of the board characteristics variables have a significant and positive relationship with leverage, that is, larger board size and independence of directors have positively impacted the leverage value of industrial sectors. The leverage ratios of the two firms on board size and board independence reflect the different associations with both of the study outcomes variables. This could be due to two reasons. In the first instance, the high rate of debt financing in the capital structure reflects the risky image in the market, so investors may not show interest in investing, and as a result, prices fall; In the second instance, interest expenses on debt are tax deductible, so even more debt can increase the profitability of a company's assets which might be the better option for the board of directors

It is therefore recommended that manufacturing companies in the country should put in place strict evaluation mechanisms to identify the most appropriate board characteristics that will help to select the optimum balance of capital structure at all times. Also, firm business leaders and policymakers should devise, and implement strategies and policies that are tailored to different sectors of the economy.

## 6. References

Adams, R., Almeida, H. and Ferreira, D. (2007). Powerful CEOs and their Impact on Corporate Performance. *Review of Financial Studies,* 18(4), 1403-1432

Adeolu, O. A. and Afolabi E. O. (2019). Corporate governance and performance of Nigerian listed firms: Further evidence

Ahmadi A, Nakaa N, Bouri A (2018). Chief Executive Officer attributes, board structures, gender diversity and frm performance among French CAC 40 listed frms. Res Int Bus Financ 44:218–226. https://doi.org/10.1016/j.ribaf.2017.07. 083

Ahmadu, S., Aminu S. M and Tukur, G. (2015).Corporate governance mechanisms and firm financial performance in Nigeria. The African Economic Research Consortium. *ESUT Journal of Accountancy*, Department of Accountancy. **7** (1). Enugu State University of Science and Technology

Alfred, D. D. (2007). Corporate finance: Issues, investigations, innovations and applications (2$^{nd}$ ed.). Lagos: High. Rise Publication

Aldamen H., Duncan K., Kelly S., McNamara R., and Nagel S., (2012). Audit committee characteristics and firm performance during the global financial crisis. *The Journal of Account, Finance*. **52**, 971–1000.

Al-Thuneibat, A. (2006) Audit in the light of the international auditing standards and regulations and local laws: the theory and application. Amman, Jordan University publications.

Bebchuk, L., Cremers, M. and Peyer, U (2011). CEO centrality. *Journal of Financial Economics*. Forthcoming.

Byoun, S. (2016). How and when do firms adjust their capital structures toward targets? *The*

*Journal of Finance.* **63** (6), 3069-3096

Céspedes J, González, M and Molina, C. A (2010). Ownership and Capital Structure in Latin America. *Journal of Business Research*. **63** (3): 248-254.

David, C., and Shahla S., (2014). Corporate Governance and International Business. © 2014 David Crowther, Shahla Seifi & bookboon.com ISBN 978-87-7681-737-4

Eriotis, N., Vasiliou, D., and Ventoura-Neokosmidi, Z. (2007). How Firm Characteristics Affect Capital Structure: An Empirical Study. Managerial Finance **33**(5): 321 - 331

Harrison, J. R., Torres, D. L., and Kukalis (1988). The changing of the guard: Turnover and structural in the top management positions. Adams Sci Q. **33**: 211-232

Haque, S., Deegan, C., & Inglis, R. (2016). Demand for, and impediments to, the disclosure of information about climate changerelated corporate governance practices. Accounting and Business Research, 46(6), 620–664

Ibe, H. C. A, Ugwuanyi, G., O. , Okanya, O. C. (2017). Effect of Corporate Governance Mechanisms on Financial Performance of Insurance Companies in Nigeria. *Journal of Finance and Accounting,* 2017, Vol. 5, No. 3, 93-103. Available online at http://pubs.sciepub.com/jfa/5/3/4. ©Science and Education Publishing DOI:10.12691/jfa-5- 3-4

ICAN (2019). Institute of Chartered Accountant of Nigeria Case Study. Published by The Institute of Chartered Accountants of Nigeria, PC 16, Idowu Taylor Street, Victoria Island Lagos, Nigeria. 17-22. ISBN 978-978-57011-3-5

Ioraver N. T and Wilson E. H. (2013). Corporate Governance, Ownership Structure and Firm Performance in Nigeria. **4** (5)

Jensen, M.C (1986). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*. 1976; **1**(4): 305–360.

Kraus and Litzenberger, L. (1973). A State-Preference Model of Optimal Financial Leverage. *Journal of Finance*. **28,** 911–922.

Li, M. and Simerly, L. R.(2002). Environmental dynamism, capital structure and innovation. *International Journal of Organizational Analysis*. **10**(2):156-171

Mak, Y. T. and Yuanto, K. (2005).Size Really Matters: Further Evidence on the Negative Relationship Between Board Size and Firm Value. *Pacific-Basin Finance Journal*. 13(3):301-318. DOI: 10.2139/ssrn.303505

Margaritis, D., and Psillaki, M. (2010). Capital Structure, Equity Ownership and Firm Performance. *Journal of Banking and Finance*. **34**(3): 621-632.

Mohammad, N. U., Mohammed, S. U. Khan and Mosharrof, H., (2019). Does Corporate Governance Influence Leverage Structure in Bangladesh?. *International Journal of financial studies*. 1(4): 10-12

Nifemi, A. (2018). Nigerian Industrial and Consumer Goods: Overview & Opportunities. https://kpakpakpa.com/spotlight/nigerian-industrial-and-consumer-goods/

Odunayo, F, O., (2019). Effect of Corporate Governance on Firm Performance in Nigeria. Acta Universitatis Danubius. Œconomica. **15** (6)

Ofurum, C. O. and Torbira, L. L. (2011). Corporate Governance and Firm Performance in Nigeria. *IJEMR* 1(4) - ISSN 2249 –2585.

Oke, L.A., Saheed, D.O., and Quadri, Y.O. (2019). An empirical analysis of the corporate capital structure and financial performance of listed conglomerates in Nigeria. *Copernican Journal of Finance & Accounting*. **8**(3): 95 114. http://dx.doi.org/10.12775/CJFA.2019.0

14

Owolabi, S. A (2015). Corporate Governance Practices in Nigeria a public lecture delivered at the institute of management, remote chapter. held on Sunday, May 3, 2015, at the 500 lecture theatre, college library building, OOUth Sagamu

Phansamon G., and Yalçın C. Ö. (2012).The Influence of Capital Structure on Firm Performance. A quantitative study of Swedish listed firms. Umeå School of Business and Economics. Spring semester 2012. Master Thesis (Published)

PeiZhi, W. and Ramzan, M. (2020). Do corporate governance structure and capital structure matter for the performance of the firms? Empirical testing with the contemplation of outliers. PLoS ONE 15(2): e0229157. https://doi.org/10.1371/ journal. pone.0229157

Priya, K and Nimalathasan, B (2013). Board Characteristics and Capital Structure: A Case Study of Selected Hotels and Restaurants In Sri Lanka. *International Journal of Advanced Research in Management and Social Sciences* ISSN: 2278-6236. 2 (12)

Rocca, M. L., and Rocca, T. L. (2007). Capital structure and corporate strategy: An overview. Business Economics, 1-24.

Sanda, A.U, Mikailu, A.S and Garba, T. (2005). Corporate governance mechanisms and firm financial performance in Nigeria‖, AERC Research Paper 149, Nairobi

Sebastian, O. U. and Rapuluchukwu, U. E., (2012). The Impact of Capital Structure and Liquidity on Corporate Returns in Nigeria: Evidence from Manufacturing Firms. *International Journal of Academic Research in Accounting, Finance and Management Sciences, Human Resource Management Academic Research Society*. **2**(3): 1-16

Syed, J. and Waqas M. (2018). Impact of Corporate Governance and Capital Structure on Firm Financial Performance: Evidence from Listed Cement Sector of Pakistan. *Journal of Resources Development and Management*. www.iiste.org ISSN 2422-8397.**44**

Shah, A. and Khan, S. (2007). Determinants of Capital Structure: Evidence from Pakistani Panel Data. *International Review of Business Research Papers,* 3(4), 265-282

Shleifer, A., & Vishny, R. (2017). A Survey of Corporate Governance. *Journal of Finance* 52. 737-783.

Tong, G. and Green, C. (2005). "Pecking order or Trade-Off Hypothesis" Evidence on the Capital Structure of Chinese Companies. Applied Economies, 37(19), 2179-2189.

Usman, D.A (2015). Corporate governance mechanisms and Capital Structure of Listed foods and Beverages firms in Nigeria. Thesis. Ahmadu Bello University, Zaria.

Vehnampy, T., and Aloy-Niresh, J. (2012). The Relationship between Capital Structure and Profitability. *Global Journal of Management and Business Research*. **12** (13)

Werder, A., Talaulicar, T. and Kolat, D. (2005). Compliance with German Corporate Governance Code: An Empirical Analysis of the Compliance Statement by German Listed Companies. *Corporate Governance an International Review*, 13(2), 178-187.

Xiangwei, K. (2017). Relationship between CEO Pay Slice and Firm Performance. Master of Financial Economics Department of Economics University of Western Ontario

Yinusa, O. and Babalola, Y. A. (2012). The Impact of Corporate Governance on Capital Structure Decision of Nigerian Firms. *Research Journal in Organizational Psychology& Educational Studies*. **1**(2): 121-128. (ISSN: 2276-8475) www.emergingresource.org