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Okeke, Clement

Bingham University Nigeria

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**Board Specific Attributes and Financial Reporting Quality of Listed Consumer Goods
Firms in Nigeria.**

OKEKE, Clement Ejiofor

Department of Accounting Faculty of Administration

Bingham University

Karu, Nasarawa State.

E-mail: clemokeke@gmail.com.

Abstract

Financial reporting quality is very important in the consumer goods sector in Nigeria as it guarantees transparency, accountability, and investors' confidence. Meanwhile, the high-profile scandals that resulted in the loss of multiple investments at the beginning of the 21st century linked to lapses in financial reporting quality have continued to cast doubts in the minds of investors about the reliability of financial reports that are churned out by financial experts in all the sectors including the consumer goods sector. Some scholars have reviewed different variables that impact the quality of financial reporting such as a review of the effect of board characteristics on the financial reporting quality of firms, a review of corporate governance on the quality of financial reports, and so on. However, there is a need to carry out more of such investigations in a sector such as the consumer goods industry due to its vital role in the economic development of any nation. This paper therefore examined the relationship between Board Specific Attributes and Financial Reporting Quality of Listed Consumer Goods Firms in Nigeria. The study used an ex post facto research approach and secondary data were retrieved from the annual financial reports of selected consumer goods firms in Nigeria for eleven years from 2013-2023. STATA 13 was used to carry out correlation and regression analysis of the effects of relevant variables. The study confirmed that board size had a significantly negative effect on the financial reporting quality of listed consumer goods firms in Nigeria. The study also found that board independence and board diversity had negative and insignificant effects on the financial reporting quality of the listed consumer goods firms. The study therefore recommended that consumer goods firms need to reduce the number of non-executive directors on the board to minimize management costs. The study also encourages the firms to have a good mix of experience, gender balance, and independence in the boards' configurations.

Keywords: Board Specific Attributes, Board Independence, Board Diversity, Board Size, and Financial Reporting Quality

INTRODUCTION

Financial reporting quality is very important in the consumer goods sector in Nigeria as it guarantees transparency, accountability, and investors' confidence. Key bodies such as the Financial Reporting Council of Nigeria (FRCN) and the International Financial Reporting Standards (IFRS) provide guidelines and regulations that the firms in the sector are obligated to comply with to ensure a good level of financial reporting quality. All stakeholders in the industry expect that firms within the sector will provide accurate and reliable financial information within their respective annual accounts and statements. The annual reports should contain a true and fair reporting of the revenues, assets, liabilities, expenditures, and cash flows in line with the International Financial Reporting Standards and other generally accepted local standards. The consumer goods sector. According to Onuorah and Imene (2016); and Osayantin and Embele (2019), to further strengthen the quality of financial reporting in Nigeria's financial system, the 'Code of Corporate Governance of Nigeria 2003(as amended) was instituted as a benchmark for corporate entities in Nigeria. Key among the provisions of the Code is section 5.1(b) which maintains that the position of the chairman of the Board and Chief Executive Officer shall be separate and held by different individuals. Also, section 5.1(a) points out that the role of the Chairman would be to ensure the effective operation of the board in terms of its strategic objectives, and he/she would not be part of the day-to-day operations of the business.

The consumer goods sector in the Nigerian economy contributes to the economic growth of the nation, it contributes to the generation of employment, and foreign exchange earnings and generates revenue for the development of the country. Hence a need to guarantee sustainable stakeholders' interest in the investment in that sector. One of the ways to assure investors is by upholding the culture of good financial reporting quality as communicated annually through the financial statements and accounts.

Apart from the general internal control systems within consumer goods firms, other factors that are considered in the conversation around financial reporting quality include competence and integrity of management in preparing the financial statements. Some authors in the past have alluded to certain factors as strong contributors to the financial reporting quality. For example, the works of Osayantin and Embele (2019); Waidi (2017); and Bala and Ibrahim (2016) agree that there is a relationship between board independence, board meetings, audit committees, audit independence and financial reporting quality and listed conglomerates, deposit money banks and manufacturing firms in Nigeria

Past researchers have given accounts of how financial reporting witnessed persistent issues of corporate scandals in the past. Such setbacks brought about diverse questions about the quality of financial reports and the assurances provided by auditors across the world. Abrupt business failures due to financial scandals usually take investors by surprise and in most cases, such risks are linked to poor financial reporting quality. Some of the scandals witnessed in the past also led to the downfall of the External Auditors of the affected firms. A case in hand was the Enron scandal which led to the loss of Arthur Aderson's practicing license on June 15, 2002. Other examples where the poor quality of financial reporting by firms were interrogated include those of Worldcom, Parmalt, Xerox, Oceanic Bank Nigeria Plc, Intercontinental Bank Pls, Savanh Bank Nigeria Plc, and others. According to Suleiman *et al* (2020), the consequences of ineffective corporate governance not only affect the shareholders but also the employees, suppliers, consumers, and the nation at large. Hence a need to institute a sound corporate government that would guarantee efficient management practices and in turn ensure good financial reporting quality.

The current study used the Modified Jones model as proposed in Dechow *et al* (1995); and Dechow and Dichev (2002) as a proxy for measuring the financial reporting quality of listed consumer goods firms in Nigeria. Past research works on the topic have largely reported discordant findings on the effect of board characteristics on different sectors including the consumer sector. Hence, the main objective of the study is to further investigate the relationship between board-specific attributes and the financial reporting quality of listed consumer goods companies in Nigeria. Board Independence, Board Diversity, and Board size were used as proxies for board-specific attributes. On the other hand, the financial reporting quality was proxied by Discretionary Accruals in line with the Modified Jones model. Two control variables, firm age, and firm size were also introduced in the study for a more robust analysis.

To achieve the above objectives, the following hypotheses were used in the study:

Ho (1): Board independence has no significant effect on the financial reporting quality of listed consumer goods firms in Nigeria

Ho (2): Board diversity has no significant effect on the financial reporting quality of listed consumer goods firms in Nigeria

Ho (3): Board size has no significant effect on the financial reporting quality of listed consumer goods firms in Nigeria

2.0 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Board Specific Attributes

The governing body of a company is the board of directors who are elected by the shareholders in the case of a public company to set strategy, monitor, and supervise the management team to achieve the overall objectives and interests of the principal (the shareholders). The board of directors has specific attributes that interface with other variables within and outside the firm's environment. According to the Nigeria Securities and Exchange Commission (Nigerian SEC CCG, 2011), the board of directors has numerous attributes. A board of directors is compulsory for all public firms. There are also private firms that have a board of directors. This study narrowed its attention to board independence, board diversity, and board size, and their effects on the financial reporting quality of the listed consumer goods firms in Nigeria.

2.1.2 Board Independence

The whole essence of board independence refers to the steps to make the board effective by ensuring that insiders and executive/management owners do not have undue control over the activities and decisions of the board of directors. According to Samaila (2014), board diversity relates to the ratio of non-executive directors to the total number of directors in the board. Some researchers have looked at the effect of board independence on FRQ. Notable among them is the work of Osayanti and Embele (2019); the study confirmed that board independence had a negative relationship with FRQ. However, Onuara *et al* (2018) maintained that the relationship between board independence and FRQ was a positive relationship as shown in their work. In this study, board independence was measured by finding the percentage of non-executive directors to the total number of members in the board (executive and non-executive).

2.1.3 Board Diversity

Board diversity is a concept that focuses on the gender of board members. It brings out the proportion of female board members to the number of entire boards. Ho and Zhang (2015), Onoura *et al* (2018), Makhoulf *et al* (2018) in their different studies confirmed that board diversity has a positive and significant relationship between board diversity and financial reporting quality. In this study, board diversity was measured by finding the percentage of female board members to the number of the members of the board (male & female).

2.1.4 Board Size

The size of a firm's board refers to the total number of members serving on its board. Gabrielson (2007) cited in Nourhene and Sarra, (2019) referred to board size as 'the total number of full-time directors with voting rights on the board'. In some jurisdictions, the minimum number of directors especially for public firms is set by relevant regulatory bodies. Determination of the board size or number of directors with voting rights over the minimum requirement by law is mostly dependent on an organizational choice and the quest to position the board for better governance roles.

2.1.5 Financial Reporting Quality

Due to its broadness, financial reporting quality has been defined by many scholars in different ways. The Financial Accounting Standards Board (FASB), the International Accounting Standards Board, (IASB), the Accounting Standards Board in the United Kingdom (ASB -UK), and the Australia Accounting Standards Board(AASB), maintain that financial reporting quality represents financial statements that provide accurate and fair about the underlying financial position and economic performance of an entity. It should be noted that financial reporting quality is beyond financial items as it connotes both financial and non-financial information that can influence the judgment of any rational human being. According to Hundal, (2016), the level of discretionary accrual (DACC) can be a good indicator of earnings management (EM) an inverse proxy for Financial Reporting Quality (FRQ). Thus, in this study, FRQ was measured using DACC. Qawqzeh *et al* (2019) opined that a good FRQ and earnings quality are indicated through a low level of DACC. Most researchers have settled for the Modified Jone Model (1995) which has been recognized as the most acceptable model for measuring Discretionary Accruals. In line with Soyemi *et al* 2020, DACC can be derived by deducting DACC from TA after decomposing TA into DA and non-DACC (i.e. non-discretionary accruals). FRQ can also be described as the state in which a firm's reported financial and non-financial statements have been presented in their factual form. The discretionary accruals (DACCit) as used in this study are then calculated as:

$$DACC_{it} = TA_{it} - NDA_{it}$$

It should be noted that in this study, however, total accruals (TAit) were calculated as income before tax, interest, and extraordinary ordinary items (EBITXit) minus net cash flow from operating (CFOit) as follows:

$$TA_{it} = EBITX_{it} - CFO_{it}.$$

2.1.6 Firm Age

This concept defines how many years an organization has been in operation since its inception. According to Ilaboya and Ohiokha (2016), firm age means the length of time such an organization has existed or the year the company was founded. In terms of firm performance, past literature such as Mutende *et al* (2017); confirmed that firm age is linearly related to financial performance. Shumway (2001) argued firm age should be the number of years of incorporation of the firm though some other researchers believe that listing age should be used to determine the firms. In this study, firm age was determined by the incorporation date.

2.1.7 Firm Size

Firm Size refers to the scale on which a firm operates. It is usually ascertained by features such as total sales, asset value, employment numbers, or business volume. Hence, a firm's size could be defined as a quantifiable measure of the firm's scale and operating capacity. In today's world, the size of a firm plays a significant influence in the determination of its competitiveness in any sector of the economy. Further based on this concept, the firm's size has become a very important factor in determining the impacts of other variables on outcomes like the quality of financial reporting. There are empirical corporate finance researches where firm size has been proven to have a great impact on related variables. According to Kioko, (2013); and Ishak *et al* (2018) large firms are more likely to experience higher agency problems. This implies that that there could be more difficulties in managing the activities of large firms especially as relates to their divers' operational lines. So long as agency management becomes cumbersome, as may be caused by the size of the firm, the tendency of the board not being able to sufficiently monitor the activities of the managers becomes imminent and the question of impacts on the financial management quality becomes obvious. There are several definitions and measurements for firm size in the literature. Firm size could be determined using such factors as total sales, assets value, employment number, or business volume al factors such as total sales, assets value, employment numbers, or volume of business. In this study, firm size was measured by the total assets value. The logarithm of the total assets of the firms was applied. That is the logarithm of Total Assets per year, {log (TA) per year}

2.2 Empirical Review

Obiekea and Ebiaghan (2023) in the paper titled "An Assessment of the Nexus Between Firm Attributes and Financial Reporting Quality in Nigeria" examined the relationship between the firm attributes and financial reporting quality of listed consumer goods in Nigeria. The study applied ex post facto research design and made use of secondary data from annual audited financial statements of twelve listed consumer goods firms in Nigeria. The period covered by the study was

2012-2021. The data were analysed using descriptive statistics, diagnostic test and inferential statistics. The study found that board size (board composition) has negative and significant impact on the financial reporting quality of listed consumer goods firms in Nigeria. The study also confirmed that firm size has insignificantly negative impact on the consumer goods firm in Nigeria. The study recommended that listed consumer goods firms in Nigeria should pay attention to the potential negative impact of firm size and board size on financial reporting quality. The findings of the current study agree Obiekea and Ebiaghan (2023) on the negative relationship between both board size and firm size on one hand and the financial reporting quality of consumer goods firm on the other hand. The current study also confirmed and agrees that board size (board composition) significantly impacts the financial reporting quality of the consumer goods firms in Nigeria. However, the current study found that firm size also has a significant relation with the consumer foods firms' financial reporting quality as against the opinion of Obiekea and Ebiaghan (2023). The work of Obiekea and Ebiaghan (2023) reviewed a period that ended in 2021 while the current study applied an updated period to 2023

Ephraim and Adamu (2023) investigated the 'Impact of Corporate Governance on Financial Reporting Quality of Listed Nigeria Industrial Goods Companies'. The study used ex post facto research design and made use of data from the annual audited financial statements of listed industrial goods firms in Nigeria from 2012 to 2021. With the use of Generalised List Square (FGLS) regression, the study analyzed the secondary data as extracted. The study found that board size had a significantly positive effect on the financial reporting quality of listed industrial goods firms in Nigeria. The study also found that board independence and board gender (board diversity) were negatively insignificant to the financial reporting quality of the listed industrial goods firms. The study recommended that the board of directors of the listed industrial goods firms in Nigeria should be effectively constituted with reasonable members. The major differences between the study and the current one were the sector difference and the use of independent variables, while the current study focused on consumer goods and used board independence, board diversity, and board size as proxies for firm-specific attributes, the study looked at the industrial sector and proxied corporate governance with board bard shareholding, board professional expertise, CEO compensation and audit committed independence in addition to board independence, board gender(diversity), board size and firm size. Both studies agreed that board composition or board size and firm size significantly affect financial reporting quality.

Shika *et al* (2022) reviewed the impact of Monitoring Characteristics and Financial Reporting Quality of Nigeria Listed Consumer Goods Firms. The study applied ex post facto research design and made use of data from the audited financial statements of 8 listed consumer goods firms for a period of 9 years (2011-2020). The study used multiple regression analysis to analyze data collated. The findings of the study showed that monitoring characteristics variables were significantly related to the financial reporting quality of consumer goods firms in Nigeria. Board composition was singled out as a crucial factor. The study recommended that consumer firms should minimise the representation of non-executive members in the board as it found that such encourages earnings management and subsequently reduce financial reporting quality. The study also suggested that as careful make up of the board with a focus on the reduction of non-executive members could enhance financial reporting quality. The findings of the current study agree with Shika *et al* (2022) on the significant relationship between firm size and financial reporting quality of consumers but disagree that the relation is a positive one as found by Shika *et al* (2022). The current study found a negative but significant relation between the firm size and financial reporting quality of the consumer good firms. Again, the current study found a negative and insignificant relationship between board independence and financial reporting quality of the consumer firms while Shika *et al* (2022) found a positive and significant relationship between the non-executive board member sand financial reporting quality. The study covered a period the 2011-2020 while the current study has reviewed an updated period 2013-2023. The sector is the same as the current study, but variable used are not the same. It's not also clear the proxy used for financial report quality by Shika *et al* (2022). Meanwhile, the current study has applied the Modified Jone Model in defining the proxy (Discretionary Accruals) used to represent FRQ. The current study also had a sample size of 13 consumer good firms as against the 8 studied by Shika *et al* (2022).

Suleiman *et al* (2020) studied the relationship between Board Attributes and the Financial Reporting Quality of Listed Consumer Goods Companies in Nigeria. The objective of the study was to investigate the effect of board attributes on the financial reporting quality of the listed consumer goods firms in Nigeria. The period covered in the study was 2013-2018 and a sample of thirteen (13) firms were selected using census technique after applying two filters. Suleiman *et al* (2020) used an ex post facto research design and panel data from the annual audited financial statements of the selected firms were analysed. Ordinary Least Square (OLS) Model regression was used to test the study's hypotheses. The study found that board independence and board

diversity had insignificant relationships with the financial reporting quality of first in the consumer goods sector. The study also found that board expertise had a significant effect on the firm's financial reporting quality. The study concluded that board attributes especially board expertise affect financial reporting quality. It recommended that non-executive directors on the board with accounting knowledge, professional certifications and considerable work experience should be increased in order to reduce management manipulations and prevent frauds in the firm, The current study considered a more current period 2013-2023 and also had board size and two control variables unlike what Suleiman *et al* (2020) did. The current study agrees with Suleiman *et al* (2020) that board independence and diversity have insignificant effects on financial reporting quality. However, the findings of the current study showed that board independence and board diversity were negatively related to the financial reporting quality of the consumer firms as against the reports of Suleiman *et al* (2020) which indicated that they are positively related.

Osayantin and Embele (2019) investigated the impact of Board Characteristics and Financial Reporting Quality of Listed Manufacturing firms. The study applied a multi-method quantitative research design motivated by a positivist research philosophy and a deductive research approach. Secondary data were collated from the annual audited financial statements of selected firms for the period 2013-2017. Generalised Linera Model Regression was used in testing the hypotheses. The study found that board independence and board diversity had insignificant relationships with financial reporting quality of manufacturing firms. The study concluded that board characteristics partially affect financial reporting quality. The study recommended that manufacturing firms should reduce the number of non-executive directors on the board to help minimise management costs. Findings of the current study agree with Osayantin and Embele (2019) that both board independence and diversity have insignificant relationship with the financial reporting quality. While the current study also agrees with the Osayantin and Embele (2019) on the negative relation between board independence and financial reporting quality, it disagreed with them on the reported positive relationship between board diversity and financial reporting quality. The current study on the contrary confirmed that board diversity has a negative relationship with the financial reporting quality. The current study also disagrees with Osayantin and Embele (2019) hopeon the reported indignantly positive relationship between firm size and financial reporting quality.

Adegboye *et al* (2019) investigated the 'Effect of Firm Attributes on Financial Reporting Quality: Evidence from Listed Consumer Goods Companies in Nigeria'. The study used *ex post facto*

research design and made use of data from the annual audited financial statements of listed consumer goods companies in Nigeria from 2008 to 2017. Financial reporting quality was measured in line with Jones' modified model of 1991. With the use of Panel multiple regressions, the study analyzed the secondary data as extracted. The study found that board composition had a significant effect on the financial reporting quality of listed consumer firms. The study also found that firm size was statistically insignificant to the financial reporting quality of the listed firms. The study concluded that Firm Growth, Profitability, and Board Composition influenced the financial reporting quality of consumer goods firms in Nigeria during the period 2008-2017. The major difference between the study and the current one was the choice of independent variables, while the current study used board independence, board diversity, and board size, the study made use of firm growth, profitability, and board composition. Both studies agreed that board composition or board size significantly affects the financial reporting quality of listed consumer goods companies in Nigeria. The study was conducted in 2019 with data from listed consumer goods firms from 2008-2017 while the current study used data from the same sector but updated to 2023.

Mubarak (2018) studied the Impact of Corporate Governance on the Quality of Financial Reporting in The Nigerian Chemical and Plant Industry. The main objective of the study was to examine the impact of corporate governance on the quality of financial reporting in the Nigeria Chemical and plant Industry. The study applied ex post facto research design and secondary data were extracted from the annual audited financial statement of five listed Chemical and plant industry companies in the Nigeria Stock Exchange Group as of December 2013. The data from 2009-2013 was analyzed using correlation and regression methods. The study concluded that Board Size, and Board independence had insignificant effects on the quality of financial reporting in the Nigeria Chemical and plant industry. The study recommended that the regulatory agencies should set up a committee to verify the appointment of non-executive directors so that 'grey' directors should not be part of the board of the firms in the industry. The study also recommended that the Securities and Exchange Commission (SEC) in collaboration with some other government bodies should ensure that only competent and experienced members are appointed to the board of the firms. The current study focused on consumer goods firms and used updated data up to 2023. Mubarak (2018) reviewed a limited period (i.e., 2009-2013) which was five years while the current study reviewed the research area using an eleven-year interval which gave room for a more robust and comprehensive analysis. The current study agreed that the effect of board independence on

financial reporting quality was insignificant but disagreed with Mubarak on his findings which suggested that board size insignificantly affected the quality of financial reporting.

Susan *et al*, (2017) reviewed the 'Effects of Audit Committee Characteristics on Quality of Financial Reporting Among Firms listed in Nairobi Securities Exchange, Kenya' The main object of the study was to establish the effects of audit committee attributes on the financial reporting quality of firms listed in the Nairobi Securities Exchange Kenya. The study was underpinned by the Agency Theory and made use of an explanatory research design. The study took a survey of all the 46 firms listed in the NSE as of the year 2014. Secondary data extracted from the firm's records were utilized and analysed using both descriptive and inferential statistical methods. The study found that audit committee size had a significantly positive effect on the quality of the financial reports of the listed companies. However, the study also found that audit committee independence has a negative but significant effect on the quality of financial reporting of the reviewed listed firms in Nairobi Securities Exchange Kenya. The current study was conducted in Nigeria and focused on consumer goods firms. The proxies used by Susan *et al*, (2017) for the independent variables, audit committee independence, and audit size could be considered as a microcosm of the bigger board attributes such as board size considered in the current work. The current work looked at the bigger picture using more variables for board characteristics and data spanning eleven years were analysed.

2.3 Theoretical Review

2.3.1 Agency Theory

Agency theory propounded by Stephen R. and Barry M., (1973) is a principle used to explain and resolve issues in the relationship between principals and their agents. The theory is commonly used in common terms to explain the relationship between shareholders as principals and company executives as agents. The company executives (the agents) use the resources of the principal entrusted to them for piloting the affairs of the business. The principals have little or no day-to-day input in the business. However, the overall strategic positioning of the organization lies in the hands of the principal (the resource providers). The attributes of these resource providers (the principal) are paramount according to (Ezelibe *et al* 2017). Some of these attributes are size, independence, diversity, diligence, etc. These attributes as encapsulated in the board are assumed to improve the quality of an organization's financial reports, which will, in turn, improve the confidence of the organization's stakeholders. In most agency partnerships such as the one between

shareholders and company executives, the shareholders, through the board of directors, try to cut agency costs by defining rewarding and monitoring mechanisms. The theory ensures that cost-cutting and revenue-boosting measures are implemented. Smart controls can eliminate or mitigate the problems of information asymmetry from an agency viewpoint. The current study looks at the effects of board attributes on the quality of financial reporting, hence the relevance of the agency theory can be linked to the need for an all-round board that would be capable of supervising the activities of the management and ensuring good quality in the reportage of financial activities.

2.3.2 The Resource Dependency Theory (RDT).

The study is underpinned by the Resource Dependency Theory (RDT). RDT was propounded by Pfeffer and Salancik (1978) to demonstrate how firms' behaviors are affected by the external resources they possess. Pfeffer and Salancik (1978) were of the view that organisations change, and also negotiate with their external environment to gain access to the resources which they need to survive. This position largely entails that an organization's competitiveness is determined by the way they deal with their external resource. Van (2018) corroborated the position of Pfeffer and Salancik (1978) by maintaining that the way a firm deals with its external resources remains more important than its internal resources. In this study, some of the important implications of Resource Dependency Theory (RDT) that come to mind relate to the optimal organisational structure and recruitment of board members and employees. Resource dependency theory entails the following vital points (a) Firms react to the actions of external elements that control critical resources (b) Such critical resources come from the firm's environment, (c) The environment also has other organizations/firms, (d) The resources needed by one firm are often in the hands of other organisations. (e) Resources are a basis of power, (f) legally constituted firms can be dependent on each other, (g) Resource dependence and power are directly related. (i) Power is situational and depends on what is happening at each time and finally (j) Managers attempt to manage their external dependencies to ensure survival and acquire more autonomy. RDT becomes very key in the discussion of a study such as this to ensure that a good mix in the effect of board-specific attributes the quality of financial reporting. The users of the financial report are key stakeholders in the environment whose resources, power, and influences determine the future of the organization in question. In summary, RDT is concerned with power relations. It also analyses how the managers deal with parties with power over its resources (Pfeffer & Salancik 1978). The theory assumes that the managers' behavior should ensure access to resources through acquisition and alliances. It does not assume misbehaviour on the side of the managers but rather it assumes the

abuse of power which must be curtailed. Pfeffer and Salancik (1978) also argued that in some cases uncontrolled behaviors of some managers could be viewed as misbehaviors.

Resource dependence theory is concerned with power relations. It analyzes how managers deal with parties that have power over the company because they control the resources that the firm needs to operate (Pfeffer & Salancik, 1978). The traditional solution is establishing relationships to ensure access to the necessary resources through acquisition, co-optation, or alliances. The theory does not assume misbehavior but rather the abuse of power, which in some cases can be viewed as misbehavior.

3. Methodology

The study adopted ex post facto research. The area of study was all listed consumer goods companies in Nigeria Exchange Group as of December 2023. The total population of this study consists of twenty-one (21) industrial goods firms listed in the Nigeria Exchange Group as of 31st December 2023. To arrive at the sample size, the purposive sampling technique was adopted. The yardstick used was that every firm that qualifies for selection must be in active operation before the year 2013 and remain in operation during the period of the study (2013-2023) and selections were also made on the consumer goods firm in Nigeria exchange Group stratification of the listed firms. This was basically to reduce any problems associated with validity and reliability. A total of thirteen (13) consumer goods firms were selected for the sample. The study covers a period of 11 years ranging from 2013-2023. The secondary data collected for the dependent and independent variables were analyzed using descriptive statistics, correlation analyses, panel regression, and post-regression diagnostic tests on variables using the statistical software STATA version 13. The panel data regression analysis model of Suleiman *et al* (2020) was adjusted to determine the relationship between board-specific attributes and financial reporting quality based on the use of discretionary accruals (DACC) as a proxy for financial reporting quality (FRQ) and board independence (BDIND), board diversity (BDDIV), board size(BDSIZE) as proxies for board specific attributes. While firm age (FIRMAGE) and firm size (FIRMSIZE) were introduced as control variables. The regression model for the empirical analysis is therefore expressed as:

$$FRQ_{it} = \beta_0 + \beta_1 BDIND_{it} + \beta_2 BDDIV_{it} + \beta_3 BDSIZE_{it} + \beta_4 FIRMAGE_{it} + \beta_5 FIRMSIZE_{it} + \epsilon_i$$

Where:

FRQ(DACC_{it}) = Financial reporting quality

β_0 = Constant

BDIND = Board Independent

BDDIV = Board diversity

BDSIZE= Board Size

Control variables:

FIRMAGE= Firm Age

FIRMSIZE = Firm Size

ϵ_i = error term

i = Cross-sectional (Companies)

t= Time Series

A priori expectations in line with extant literature to be $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, > 0$

Models of Financial Reporting Quality Measurement

Suleiman *et al* (2020) cited Dechow *et al* (1995) confirming their observation on the original Jones model which according to them was unable to capture the impact of sales-based manipulation because accounts receivables should not be considered as nondiscretionary accruals. Hence, Dechow *et al* (1995) proposed a modification to the original Jones model known as the Modified Jones model (1995). Based on the Modified Jones model (1995), the nondiscretionary accruals (NDA) of the event period for the firm i in time phase t is calculated using:

$$NDA_{i,t} = A_{i,t-1} + (\Delta REV_{i,t} - \Delta AR_{i,t}) + PPE_{i,t}$$

Where:

$NDA_{i,t}$ = nondiscretionary accruals for company i in year t

$A_{i,t-1}$ = lagged (one year) total assets

$\Delta REV_{i,t}$ = change in revenues for company i in year t

$\Delta AR_{i,t}$ = change in net receivables for company i in year t

$PPE_{i,t}$ = property, plant, and equipment for company i in year t

The discretionary accruals ($DACC_{i,t}$) as used in this study are then calculated as:

$$DACC_{i,t} = TA_{i,t} - NDA_{i,t}$$

It should be noted that in this study, however, total accruals ($TA_{i,t}$) was calculated as income before tax, interest, and extraordinary ordinary items ($EBITX_{i,t}$) minus net cash flow from operating ($CFO_{i,t}$) as follows:

$$TA_{i,t} = EBITX_{i,t} - CFO_{i,t}$$

3.1 Definition of variables

S/N	PROXY	TYPE	MEASUREMENT	SOURCE
1	Discretionary Accruals (DACC) representing Financial Reporting Quality (FRQ)	Dependent Variable	Measured in line with the Modified Jones and used as a proxy for financial reporting quality given by $DACC_{it} = TAIT_{it} - NDA_{it}$ where $Tait = EBITX - CFO_{it}$	Jerubet <i>et al</i> (2017)
2	Board of Directors' Independence (BDIND)	Independent Variable	The ratio of non-executive directors to board size (in %)	Ilaboya and Lodikero (2017)
3	Board diversity (BDDIV)	Independent Variable	Percentage of females on the board	Ilaboya and Lodikero (2017)
4	Board size	Independent Variable	Number of board members (both executive and non-executive)	Obiekea and Ebiaghan (2023)
5	Firm Age (FIRMAGE)	Control Variable	Number of years the firm has been in existence (calculated from the date of incorporation)	John <i>et al</i> (2023).
6	Firm Size (FIRMSIZE)	Control variable	Natural log of the firm's Total Assets	Ilaboya and Ohiokha(2017)

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Descriptive statistics give a presentation of the mean, median, maximum, and minimum values of variables applied together with their standard deviations obtainable. The table below shows the descriptive statistics for the variables applied in the study. An analysis of all variables was obtained using the STATA-13 software for the period under review.

Table 2; Descriptive Statistics Result

Variable	Obs	Mean	Std. Dev.	Min	Max
dacc	143	-227.1894	262.4147	-1526.875	7.1876
bdind	143	76.53846	13.58633	18	93
bddiv	143	16.11189	10.49688	0	57
bdsiz	143	11.11189	2.765748	6	18
firmage	143	52.30769	19.16358	8	100
firmsize	143	10.83573	.6523192	9.07	11.9

STATA 13 OUTPUT (2024)

Table 1 presents the descriptive statistics of the relationship between board-specific attributes and the financial reporting quality of listed consumer goods firms in Nigeria from 2013 to 2023. The table shows that Discretionary Accruals (DACC) as a measure of financial reporting quality has a mean of -N227.1894 billion with a standard deviation of N262.4147 billion, a minimum value of -N1526.875 billion, and a maximum value of N7.1876 billion. Though the range between the minimum and the maximum is wide, it implies a stable value for the discretionary accruals as the standard deviation indicated that there is no wide dispersion of the data from the mean. For the other measure of board-specific attributes, Board Independence (BDIND), Board Diversity (BDDIV), and Board Size(BDSIZE) the table shows a mean value of 76.5%, 16.11%, 11 persons with standard deviations of 13.59%, 10.5% and 2 persons with minimum values of -18%, 0%, and 6persons respectively. This implies that the board-specific attributes variables in terms of Board Independence (BDIND), Board Diversity (BDDIV), and Board Size (BDSIZE) have a substantial decrease during the study period, as the standard deviation remained lower compared to the mean,

4.2 Correlation Matrix**Correlation Analysis**

Table 3 presents correlation values between dependent and independent variables and the correlation among the independent variables themselves. These values are generated from Pearson Correlation output. The table contains a correlation matrix showing the Person correlation coefficients between the dependent and independent variables and among the independent variables of the study. Generally, a high correlation is expected between dependent and independent variables while a low correlation is expected among independent variables.

Decision Rule: A correlation is between two variables that range from -1 and +1.

Table 4. Correlation Matrix

	dacc	bdind	bddiv	bdsiz	firmage	firmsize
dacc	1.0000					
bdind	0.0012	1.0000				
bddiv	-0.1716	-0.2252	1.0000			
bdsiz	-0.5201	0.0632	-0.2719	1.0000		
firmage	-0.1491	-0.2338	0.1824	0.1917	1.0000	
firmsize	-0.7868	-0.0322	0.2655	0.3997	0.1282	1.0000

STATA 13 OUTPUT (2024)

The Pearson correlation coefficient (r) was employed to establish the measures of associations between the variables. The table above shows the Pearson correlation coefficient and the respective probabilities of the relationship between board-specific attributes board independence, board diversity, board size (BDIND, BDDIV, and BDSIZE), and CR) and financial reporting quality variable (DACC). The results show that the coefficient of the correlation between DACC and BDIND stood at 0.0012 which is positively correlated. This implies that an increase in DACC would lead to an increase in BDIND (though very low as it stands). The coefficient of correlation between DACC and BDDIV stood at -0.1716 which is negative. This implies that an increase in DACC would lead to a decrease in increase in BDDIV. The coefficient of correlation between DACC and BDSIZE stood at -0.5201 which is also negative. This implies that a change in DACC would impact negatively on the BDAGE. Furthermore, the coefficients of the correlation between DACC and FIRMAGE & FIRSIZE stand at -0.1491 and -0.7868 respectively. The result presented above confirms that board-specific attributes and financial reporting quality have varying negative correlation

4.3 Diagnostic Test (Multicollinearity)

To validate the robustness of the estimates, the multicollinearity test was conducted, using the Variance Inflation Factor (VIF) as a diagnostic check. Multicollinearity happens when one or more of the independent variables exert superior influence on the others and this position is a violation of the assumptions for linear regression modeling so it can impact the validity of the results from the analysis.

Decision Rule: A centered VIF of less than 10 is an indication of the absence of multicollinearity, while a centered VIF of more than 10 is a sign of multicollinearity.

Table 5: Multicollinearity Test (VIF) Result

Variable	VIF	1/VIF
bdsiz	1.55	0.643602
firmsiz	1.46	0.686687
bddiv	1.44	0.694989
firmsiz	1.16	0.862405
bdind	1.10	0.907538
Mean VIF	1.34	

STATA E-VIEW 10 OUTPUT (2024)

Table 5 shows that there is no multicollinearity among the independent variables since the independent variables (BDIND, BDDIV, BDSIZE, and the control variable, FIRMAGE and FIRMSIZE) have a center VIF that is less than 10.

4.4 Heteroskedasticity Test

A heteroskedasticity test was carried out as a diagnostic check to verify the robustness of the estimates. The heterogeneous variance occurs when a standard error of the variable being monitored is not constant over time. Heteroscedasticity violates linear regression modeling assumptions and can affect the validity of analytical results. On the other hand, heteroscedasticity does not cause any bias in the coefficient estimates, but it reduces the precision, and less precise coefficients are more likely to be estimated. The estimates are far from the correct population values that have been removed.

*Decision Rule: At a 5% level of significance

Hypothesis

H0: The Error Variances are all Equal (Homoscedastic)

H1: The Error Variances are not Equal (Heteroskedasticity)

Decision Rule: If the p-value is less than 0.05, the null hypothesis is rejected, and the alternative hypothesis should be accepted.

Table 6 Heteroskedasticity Test

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of dacc

chi2(1)      =    52.94
Prob > chi2  =    0.0000
```

STATA 13 OUTPUT (2024)

Table 6 shows the results of the panel cross-section Heteroskedasticity regression test. The decision rule for the panel cross-section Heteroskedasticity test is stated above.

From the result in Table 6 above with a probability value of 0.0000 which is less than 5%, the study therefore posits that there is every reason to reject the null hypothesis, while the alternative hypothesis which states there is a conditional Heteroskedasticity problem is accepted. Consequently, based on the diagnostic probability of 0.0000 the null hypothesis is rejected, thus there is conditional heteroskedasticity, indicating that residuals are heteroscedastic, and as such the samples did not give a true reflection of the population. In summary, Since the results of the test showed a probability value of less than 5%, it meant there was a problem with heteroskedasticity, hence the two tests (FIXED and RANDOM EFFECT) were carried out.

4.5 Hausman Test

The Hausman test is a model specification test used in panel data analysis to select between fixed and random effects models. Because the datasets utilized in this study were panel data, both fixed and random effects were performed. A Hausman specification test was then used to choose between the fixed-effects and random-effects regression models. This test determined if the error term was connected to the regressor. As a result, the decision rule for the Hausman specification test is presented at a 5% level of significance:

H0: Random effect is more appropriate for the Panel Regression analysis.

H1: Fixed effect is more appropriate for the Panel Regression analysis.

Decision Rule: If the p-value is less than 0.05, the null hypothesis is rejected, and the alternative hypothesis should be accepted.

Table 7: Hausman Specification Test

	— Coefficients —			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bdiv	-.1989641	-.3635066	.1645425	.3992466
bddiv	-2.684228	-3.109591	.4253634	1.043554
bdsiz	-11.51422	-14.76086	3.246632	3.427471
firmage	-11.10967	-1.014426	-10.09524	5.637803
firmsize	-238.0238	-296.1506	58.12689	55.17306

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\begin{aligned} \text{chi2}(5) &= (b-B)' [(V_b-V_B)^{-1}] (b-B) \\ &= 10.28 \\ \text{Prob}>\text{chi2} &= 0.0678 \end{aligned}$$

STATA 13 OUTPUT (2024)

Results of the Hausman test indicated in Table 7 showed sufficient evidence for the acceptance of the null hypothesis at a 0.05 level of statistical significance. As can be seen, the probability value 0.0678 of the test is higher than the critical value of 0.05. Therefore, the study went further to test Lagrangers since the Random effect was selected. Note, since Random was selected from the Hausman test, it was required to conduct the Lagranger test to choose between Randon and Pool. As a result, the decision rule for the Lagranger specification test is presented at a 5% level of significance:

H0: Random effect is more appropriate for the Panel Regression analysis.

H1: Pool is more appropriate for the Panel Regression analysis.

Decision Rule: If the p-value is more than 0.05, the null hypothesis is rejected, and the alternative hypothesis should be accepted.

Table 8: Lagrange Specification Test

Breusch and Pagan Lagrangian multiplier test for random effects

$$dacc[id,t] = Xb + u[id] + e[id,t]$$

Estimated results:

	Var	sd = sqrt(Var)
dacc	68861.49	262.4147
e	16629.94	128.9571
u	8634.216	92.92048

Test: $\text{Var}(u) = 0$

chibar2(01) = 29.74

Prob > chibar2 = 0.0000

STATA 13 OUTPUT (2024)

Results of the Lagrangian test indicated in Table 8 show sufficient evidence for the acceptance of the null hypothesis at a 0.05 level of statistical significance. As can be seen, the probability value of 0.0000 of the tests is lower than the critical value of 0.05. Therefore, the study selected Random and Pool was rejected.

Table 9: Panel Regression Result (Random Effect)

```

Random-effects GLS regression           Number of obs   =       143
Group variable: id                     Number of groups =        13

R-sq:  within = 0.4219                 Obs per group:  min =        11
        between = 0.7953                avg =       11.0
        overall = 0.6510                max =        11

                                         Wald chi2(5)    =       133.00
corr(u_i, X) = 0 (assumed)             Prob > chi2     =       0.0000

```

dacc	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
bdind	-.3635066	1.030137	-0.35	0.724	-2.382538	1.655525
bddiv	-3.109591	1.632229	-1.91	0.057	-6.308701	.0895187
bdsiz	-14.76086	6.644426	-2.22	0.026	-27.78369	-1.738019
firmage	-1.014426	1.478315	-0.69	0.493	-3.911871	1.883019
firmsize	-296.1506	36.00943	-8.22	0.000	-366.7278	-225.5735
_cons	3276.827	375.6826	8.72	0.000	2540.503	4013.152
sigma_u	92.920484					
sigma_e	128.95713					
rho	.34175754	(fraction of variance due to u_i)				

STATA 13 OUTPUT (2024)

Table 9 shows a panel regression result of the dependent variable proxied by DACC, three independent variables BDIND, BDDIV, and BDSIZE, and two control variables FIRMAGE and FIRMSIZE. Table 9 shows that the coefficient of the variable BDIND was -0.3635066 with a p-value of 0.724 (>0.05). That means that board independence has a negative but insignificant effect on the financial reporting quality of listed consumer goods firms which supports the first null hypothesis. On the other hand, the second hypothesis showed that the coefficient of the variable BDDIV was -3.109591 with a p-value of 0.057 (>0.05). This confirms that BDDIV (board diversity) also has a negative and insignificant effect on the financial reporting quality of firms listed under the consumer goods sector in Nigeria. This supports the second null hypothesis. Furthermore, Table 9 shows that the coefficient of the variable BDSIZE was -14.376086 with a p-value of 0.026 (<0.05). This means that board size (BDSIZE) has a significantly negative effect on the financial reporting quality of listed consumer goods firms in Nigeria which supports the rejection of the third null hypothesis

Table 9 also confirmed that the control variable (firm age) has a negative and insignificant effect while the second control variable (firm size) has a negative but significant effect on the financial reporting quality of listed consumer goods firms.

4.5 Discussion of Findings

The result of the study as explained above indicated that board independence has a negative and insignificant effect on the financial reporting quality of the companies listed under the consumer goods sector in Nigeria. This suggests a negligible relationship between board independence and financial reporting quality. The study agreed with the findings of Osayantin and Embele, (2019) and Ephraim and Adamu (2023) but was contrary to the opinion of Suleiman *et al* (2020)

Also, it is evident from the findings that board size has a negative but significant impact on the financial reporting quality of consumer goods firms in Nigeria. This finding agrees with that of Obiekea and Ebiaghan (2023), Adegboye *et al* (2019), and Ephraim and Adamu (2023) but did not align with the findings of Mubarak (2018).

5. CONCLUSION AND RECOMMENDATIONS

The study reviewed the relationship between board-specific attributes and the financial reporting quality of firms in the consumer goods sector in Nigeria. Based on the findings from the analyses and discussions, the study concludes that board-specific attributes partially affect financial reporting quality as two out of the three variables used to proxy board-specific attributes were not statistically significant. The conclusion notes that only board size (the third proxy used for board-specific attributes) had a significant impact on financial reporting quality. Based on the findings of the study the following recommendations are proffered:

- i. Firms in the consumer goods sector are advised to reduce the number of non-executive directors on the board to minimize management costs.
- ii. Though board diversity showed an insignificant relationship with the financial reporting quality, its negative effect could pose a threat in the long run. Hence, a need for relevant regulatory bodies to consider guiding the ratio of females to males in the boardroom.
- iii. Board size has a significant effect on financial reporting quality therefore firms are advised to ensure adequate composition of their board. The firms in the consumer goods sector are encouraged to have a good mix of experience, gender balance, and independence in the board configuration.

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Appendix 1: Pool Test Results

Source	SS	df	MS			
Model	6588731.11	5	1317746.22	Number of obs =	143	
Residual	3189600.64	137	23281.7565	F(5, 137) =	56.60	
Total	9778331.75	142	68861.4912	Prob > F =	0.0000	
				R-squared =	0.6738	
				Adj R-squared =	0.6619	
				Root MSE =	152.58	

dacc	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
bdind	-.3933452	.9893027	-0.40	0.692	-2.349623	1.562933
bddiv	-1.922404	1.463236	-1.31	0.191	-4.815853	.9710446
bdsiz	-26.2824	5.770886	-4.55	0.000	-37.69393	-14.87087
firmage	-.0361932	.7195013	-0.05	0.960	-1.458957	1.386571
firmsize	-263.9002	23.68777	-11.14	0.000	-310.7411	-217.0592
_cons	2987.382	239.6303	12.47	0.000	2513.53	3461.235

STATA 13 OUTPUT (2024)

Appendix 2: Fixed Effect Results

```

Fixed-effects (within) regression              Number of obs   =       143
Group variable: id                          Number of groups =        13

R-sq:  within = 0.4408                      Obs per group:  min =        11
        between = 0.3548                      avg =           11.0
        overall = 0.3416                      max =           11

corr(u_i, Xb) = -0.6417                      F(5,125)        =       19.71
                                                Prob > F        =       0.0000

```

dacc	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
bdind	-.1989641	1.104799	-0.18	0.857	-2.385498	1.98757
bddiv	-2.684228	1.937312	-1.39	0.168	-6.518408	1.149952
bdsiz	-11.51422	7.47636	-1.54	0.126	-26.31087	3.28242
firmage	-11.10967	5.828399	-1.91	0.059	-22.64479	.4254604
firmsize	-238.0238	65.88433	-3.61	0.000	-368.417	-107.6305
_cons	3119.515	532.6206	5.86	0.000	2065.392	4173.637
sigma_u	236.95848					
sigma_e	128.95713					
rho	.77150165	(fraction of variance due to u_i)				

```

F test that all u_i=0:      F(12, 125) =      5.57      Prob > F = 0.0000

```

STATA 13 OUTPUT (2024)

Appendix 3: Data Used for Analyses

Companies	Year		Discretionary Accruals "Billion=N="	Board Independence (% of Non- Executive Board Dir to Board Size)	Board Diversity (% of Female Board members to Board Size)	Board Size (Number of Board Members)	Firm Age (measured from Date of incorporation)	Firm Size (Log of Total Assets)
	ID	Year	DACC	BDIND	BDDIV	BDSIZE	FIRMAGE	FIRM SIZE
CADBURY NIGERIA PLC.	1	2013	-60.4047	71	29	7	48	10.6352
CADBURY NIGERIA PLC.	1	2014	-53.2967	71	29	7	49	10.4597
CADBURY NIGERIA PLC.	1	2015	-42.6942	71	29	7	50	10.4536
CADBURY NIGERIA PLC.	1	2016	-43.2513	71	29	7	51	10.4532
CADBURY NIGERIA PLC.	1	2017	-42.9268	71	29	7	52	10.4537
CADBURY NIGERIA PLC.	1	2018	-48.4780	71	29	7	53	10.4398
CADBURY NIGERIA PLC.	1	2019	-45.8000	71	29	7	54	10.4594
CADBURY NIGERIA PLC.	1	2020	-40.9259	71	29	7	55	10.5213
CADBURY NIGERIA PLC.	1	2021	-52.7302	71	29	7	56	10.6404
CADBURY NIGERIA PLC.	1	2022	-67.4744	71	57	7	57	10.7761
CADBURY NIGERIA PLC.	1	2023	-96.5408	67	50	6	58	10.8023
CHAMPION BREW. PLC	2	2013	-15.2098	90	0	10	39	9.9608
CHAMPION BREW. PLC	2	2014	-17.2549	89	0	9	40	9.9819
CHAMPION BREW. PLC	2	2015	-17.8478	89	11	9	41	10.0141
CHAMPION BREW. PLC	2	2016	-16.7623	91	9	11	42	9.9983
CHAMPION BREW. PLC	2	2017	-18.1980	91	9	11	43	10.0038
CHAMPION BREW. PLC	2	2018	-18.8097	91	18	11	44	10.0207
CHAMPION BREW. PLC	2	2019	-21.6086	91	18	11	45	10.0407
CHAMPION BREW. PLC	2	2020	-20.5505	91	18	11	46	10.0557
CHAMPION BREW. PLC	2	2021	-26.0979	89	11	9	47	10.1299
CHAMPION BREW. PLC	2	2022	-26.4299	89	11	9	48	10.1890
CHAMPION BREW. PLC	2	2023	-36.7695	18	9	11	49	10.3129
DANGOTE SUGAR REFINERY PLC	3	2013	-98.5825	80	10	10	8	10.9401
DANGOTE SUGAR REFINERY PLC	3	2014	-95.5189	90	20	10	9	10.9881
DANGOTE SUGAR REFINERY PLC	3	2015	-132.1862	89	22	9	10	11.0280
DANGOTE SUGAR REFINERY PLC	3	2016	-222.8217	89	22	9	11	11.2445
DANGOTE SUGAR REFINERY PLC	3	2017	-216.7271	89	22	9	12	11.2924
DANGOTE SUGAR REFINERY PLC	3	2018	-148.3123	89	22	9	13	11.2517
DANGOTE SUGAR REFINERY PLC	3	2019	-223.3524	89	22	9	14	11.2969
DANGOTE SUGAR REFINERY PLC	3	2020	-354.0178	89	22	9	15	11.4138
DANGOTE SUGAR REFINERY PLC	3	2021	-491.1511	89	22	9	16	11.5433

Companies			Discretionary	Board	Board	Board	Firm Age	Firm
	Year		Accruals "Billion=N="	Independence (% of Non- Executive Board Dir to Board Size)	Diversity (% of Female Board members to Board Size)	Size (Number of Board Members)	(measured from Date of incorporation)	Size (Log of Total Assets)
	ID	Year	DACC	BDIND	BDDIV	BDSIZE	FIRMAGE	FIRM SIZE
DANGOTE SUGAR REFINERY PLC	3	2022	-657.4993	88	25	8	17	11.6911
DANGOTE SUGAR REFINERY PLC	3	2023	-643.4974	30	30	10	18	11.7789
FLOUR MILLS NIG. PLC	4	2013	-279.7583	93	0	14	53	11.3500
FLOUR MILLS NIG. PLC	4	2014	-305.0262	93	0	14	54	11.3427
FLOUR MILLS NIG. PLC	4	2015	-304.4843	93	0	14	55	11.5356
FLOUR MILLS NIG. PLC	4	2016	-432.5466	93	0	14	56	11.5383
FLOUR MILLS NIG. PLC	4	2017	-525.4090	93	0	14	57	11.6836
FLOUR MILLS NIG. PLC	4	2018	-576.8638	93	14	14	58	11.6110
FLOUR MILLS NIG. PLC	4	2019	-477.4391	93	7	14	59	11.6200
FLOUR MILLS NIG. PLC	4	2020	-499.6408	93	7	14	60	11.4973
FLOUR MILLS NIG. PLC	4	2021	-499.7581	93	20	15	61	11.5802
FLOUR MILLS NIG. PLC	4	2022	-750.6253	93	20	15	62	11.6881
FLOUR MILLS NIG. PLC	4	2023	-1526.8754	93	13	15	63	11.8569
VITAFOAM NIG	5	2013	-13.2091	64	18	11	51	9.9720
VITAFOAM NIG	5	2014	-11.0042	56	22	9	52	10.0427
VITAFOAM NIG	5	2015	-12.6298	56	22	9	53	9.0702
VITAFOAM NIG	5	2016	0.8292	63	25	8	54	10.1172
VITAFOAM NIG	5	2017	-17.8443	70	30	10	55	9.6827
VITAFOAM NIG	5	2018	-7.3442	60	20	10	56	9.8597
VITAFOAM NIG	5	2019	-8.2310	60	20	10	57	9.9377
VITAFOAM NIG	5	2020	-6.4596	60	20	10	58	10.1149
VITAFOAM NIG	5	2021	-17.4379	60	20	10	59	10.1858
VITAFOAM NIG	5	2022	-13.1506	64	18	11	60	10.5672
VITAFOAM NIG	5	2023	-42.0462	62	15	13	61	10.6691
GUINNESS NIG PLC	6	2013	-208.9281	92	23	13	63	11.0830
GUINNESS NIG PLC	6	2014	-205.2527	93	14	14	64	11.1217
GUINNESS NIG PLC	6	2015	-241.8233	93	13	15	65	11.0872
GUINNESS NIG PLC	6	2016	-196.8960	79	21	14	66	11.1367
GUINNESS NIG PLC	6	2017	-249.2955	79	14	14	67	11.1645
GUINNESS NIG PLC	6	2018	-260.8279	67	20	15	68	11.1854
GUINNESS NIG PLC	6	2019	-253.9782	87	20	15	69	10.9497
GUINNESS NIG PLC	6	2020	-166.8338	85	23	13	70	10.8635
GUINNESS NIG PLC	6	2021	-269.6069	85	23	13	71	11.2289
GUINNESS NIG PLC	6	2022	-314.8253	85	31	13	72	11.3338
GUINNESS NIG PLC	6	2023	-345.8888	79	7	14	73	11.3834

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	ID	Year	DACC	BDIND	BDDIV	BDSIZE	FIRMAGE	FIRM SIZE
HONEYWELL FLOUR MILL PLC	7	2013	-81.1613	78	0	9	28	10.7438
HONEYWELL FLOUR MILL PLC	7	2014	-100.2108	58	0	12	29	10.8050
HONEYWELL FLOUR MILL PLC	7	2015	-106.3715	58	0	12	30	10.8321
HONEYWELL FLOUR MILL PLC	7	2016	-134.2730	67	13	15	31	10.8811
HONEYWELL FLOUR MILL PLC	7	2017	-114.5715	67	13	15	32	11.0537
HONEYWELL FLOUR MILL PLC	7	2018	-223.0728	67	13	15	33	11.0963
HONEYWELL FLOUR MILL PLC	7	2019	-239.5667	83	8	12	34	11.1382
HONEYWELL FLOUR MILL PLC	7	2020	-249.7859	80	10	10	35	11.1531
HONEYWELL FLOUR MILL PLC	7	2021	-276.1736	89	11	9	36	11.1685
HONEYWELL FLOUR MILL PLC	7	2022	-265.4316	88	13	16	37	11.1757
HONEYWELL FLOUR MILL PLC	7	2023	-246.9899	88	13	8	38	11.2175
INTERNATIONAL BREWERIES PLC	8	2013	-25.8197	80	10	10	42	10.3624
INTERNATIONAL BREWERIES PLC	8	2014	-43.3661	78	11	9	43	10.3869
INTERNATIONAL BREWERIES PLC	8	2015	-46.0063	78	11	9	44	10.4796
INTERNATIONAL BREWERIES PLC	8	2016	-61.2670	83	25	12	45	10.5248
INTERNATIONAL BREWERIES PLC	8	2017	-83.8385	85	23	13	46	11.3658
INTERNATIONAL BREWERIES PLC	8	2018	-531.6372	89	22	18	47	11.4918
INTERNATIONAL BREWERIES PLC	8	2019	-651.8145	56	19	16	48	11.4918
INTERNATIONAL BREWERIES PLC	8	2020	-598.5655	56	19	16	49	11.5408
INTERNATIONAL BREWERIES PLC	8	2021	-710.6368	62	23	13	50	11.6721
INTERNATIONAL BREWERIES PLC	8	2022	-770.7335	63	13	16	51	11.6851
INTERNATIONAL BREWERIES PLC	8	2023	-927.6557	63	13	16	52	11.8652
N NIG. FLOUR MILLS PLC.	9	2013	-216.8728	93	0	14	42	9.5591
N NIG. FLOUR MILLS PLC	9	2014	-3.4970	92	0	13	43	9.5141
N NIG. FLOUR MILLS PLC	9	2015	-4.1699	92	0	12	44	9.3845
N NIG. FLOUR MILLS PLC	9	2016	7.1876	92	0	12	45	9.2405
N NIG. FLOUR MILLS PLC	9	2017	0.0057	75	0	12	46	9.6372
N NIG. FLOUR MILLS PLC	9	2018	-7.2611	75	0	12	47	9.7721

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	ID	Year	DACC	BDIND	BDDIV	BDSIZE	FIRMAGE	FIRM SIZE
N NIG. FLOUR MILLS PLC	9	2019	-12.9673	82	0	11	48	9.6984
N NIG. FLOUR MILLS PLC	9	2020	-9.8307	89	0	9	49	9.9290
N NIG. FLOUR MILLS PLC	9	2021	-13.9266	89	0	9	50	9.8672
N NIG. FLOUR MILLS PLC	9	2022	-19.9674	67	0	12	51	10.1243
N NIG. FLOUR MILLS PLC	9	2023	-21.2434	73	0	11	52	10.2511
NASCON ALLIED INDUSTRIES PLC	10	2013	-12.2026	89	11	9	40	10.0581
NASCON ALLIED INDUSTRIES PLC	10	2014	-19.4706	89	11	9	41	10.0988
NASCON ALLIED INDUSTRIES PLC	10	2015	-20.3602	89	11	9	42	10.2120
NASCON ALLIED INDUSTRIES PLC	10	2016	-28.3709	90	10	10	43	10.3910
NASCON ALLIED INDUSTRIES PLC	10	2017	-44.0315	80	10	10	44	10.4789
NASCON ALLIED INDUSTRIES PLC	10	2018	-38.4165	80	10	10	45	10.4810
NASCON ALLIED INDUSTRIES PLC	10	2019	-51.9176	80	10	10	46	10.5874
NASCON ALLIED INDUSTRIES PLC	10	2020	-62.6503	80	10	10	47	10.6465
NASCON ALLIED INDUSTRIES PLC	10	2021	-60.6857	80	10	10	48	10.6077
NASCON ALLIED INDUSTRIES PLC	10	2022	-74.7732	80	10	10	49	10.7445
NASCON ALLIED INDUSTRIES PLC	10	2023	-104.6936	80	30	10	50	10.9222
NESTLE NIGERIA PLC	11	2013	-183.6613	92	15	13	44	11.0343
NESTLE NIGERIA PLC	11	2014	-184.1565	56	22	9	45	11.0256
NESTLE NIGERIA PLC	11	2015	-190.9544	63	25	8	46	11.0763
NESTLE NIGERIA PLC	11	2016	-238.6876	67	11	9	47	11.2294
NESTLE NIGERIA PLC	11	2017	-268.8975	63	13	8	48	11.1667
NESTLE NIGERIA PLC	11	2018	-265.3872	75	13	8	49	11.2104
NESTLE NIGERIA PLC	11	2019	-259.6885	75	25	8	50	11.2864
NESTLE NIGERIA PLC	11	2020	-289.5551	75	13	8	51	11.3913
NESTLE NIGERIA PLC	11	2021	-404.1177	67	22	9	52	11.4917
NESTLE NIGERIA PLC	11	2022	-464.8850	60	20	10	53	11.6181
NESTLE NIGERIA PLC	11	2023	-746.1678	80	20	10	54	11.7648
NIGERIAN BREW. PLC	12	2013	-428.3290	54	8	13	67	11.4027
NIGERIAN BREW. PLC	12	2014	-414.8888	59	12	17	68	11.5437
NIGERIAN BREW. PLC	12	2015	-583.4562	59	12	17	69	11.5523
NIGERIAN BREW. PLC	12	2016	-588.1913	60	7	15	70	11.5654
NIGERIAN BREW. PLC	12	2017	-619.8090	53	12	17	71	11.5829

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NIGERIAN BREW. PLC	12	2018	-578.2814	71	18	17	72	11.5897
NIGERIAN BREW. PLC	12	2019	-578.1006	82	27	11	73	11.5826
NIGERIAN BREW. PLC	12	2020	-651.3446	80	30	10	74	11.6478
NIGERIAN BREW. PLC	12	2021	-870.4542	75	33	12	75	11.6836
NIGERIAN BREW. PLC	12	2022	-968.7991	79	36	14	76	11.7933
NIGERIAN BREW. PLC	12	2023	-998.3796	79	43	14	77	11.9016
UNILEVER NIGERIA PLC	13	2013	-70.3826	75	0	8	90	10.4018
UNILEVER NIGERIA PLC	13	2014	-39.5979	57	14	7	91	10.3950
UNILEVER NIGERIA PLC	13	2015	-68.0970	67	22	9	92	10.7005
UNILEVER NIGERIA PLC	13	2016	-97.9606	67	22	9	93	10.8603
UNILEVER NIGERIA PLC	13	2017	-123.8004	70	20	10	94	11.0831
UNILEVER NIGERIA PLC	13	2018	-153.3337	70	20	10	95	11.1201
UNILEVER NIGERIA PLC	13	2019	-108.9029	67	22	9	96	11.0157
UNILEVER NIGERIA PLC	13	2020	-123.6914	58	17	12	97	10.9615
UNILEVER NIGERIA PLC	13	2021	-147.8126	70	20	10	98	11.0346
UNILEVER NIGERIA PLC	13	2022	-157.1735	70	30	10	99	11.0983
UNILEVER NIGERIA PLC	13	2023	-157.2393	69	23	13	100	11.0656

Researcher's compilation (2024). Sourced from Audited Financial Statements of Selected Firms- 2013-2023.