

## Effect of Board Characteristics on Firms Value of Listed Industrial Goods Firms in Nigeria

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### Abstract

*This study examined the effect of board characteristic on firm value of listed industrial goods firms in Nigeria. The study adopts Expo-factor research design and the population of thirteen listed industrial goods firms on Nigeria Exchange Group for the period of ten (10) years from 2013-2022. Secondary data was collected from the published annual report of the understudy firms. The research used panel regression to analyzed data. The study revealed that board size and board independent has a positive and significant effect on firm value of listed industrial goods firms while board diversity was shown to be insignificantly affecting firms value of listed industrial goods firms in Nigeria. Based on the findings the study concluded that board characteristics has significant effect on firms' value of listed industrial goods firms in Nigeria, except for board diversity which was found to be positive but insignificant effect on firms' value. It is therefore recommended that industrial goods firms should promote diversity and inclusion throughout the organization, by ways of fostering diversity in all levels and departments, companies can benefit from a wider range of perspectives, which may ultimately contribute to improved firms value. Also, industrial goods firms should carefully consider their board size and objectives to find an optimal balance. Increasing board size within reasonable limits can lead to improved firms value. Finally, industrial goods firms should prioritize increasing the level of board independence. This can be achieved by appointing more independent Directors who have no affiliation or conflicts of interest with the company or its Management.*

**Keywords:** Board Diversity; Board Size; Board Independent; Firm Value.

### Introduction

Firm value, also used to proxy stock market performance is calculated from considerations such as anticipated future profits and the degree of systematic risks is sometimes called the basic value of the stock or safety. Some organization investors including actively done mutual funds and some hedge funds, accept commerce schemes from purchasing assets that they understand to be priced below their basic beliefs and selling those that are overpriced relative to fundamentals.

From corporation share price, the board of directors will gather how well its leader is serving Shareholders. This is why boards often keep primary executives responsible by compensating them with product or share options. However, no similar measure is available to determine how effectively the organization is serving society in general. Since majority of large-scale undertakings are organized as corporations, the upper level of management is made up of board of directors. Nevertheless, in preparation these directors do not participate in the day-to-day affairs of the organization. But this work is mostly entrusted to the managing director. They are named as executives and they are responsible to carry through the comprehensive policies developed by the board of directors. However, the highest power lies with Managers (Deeb, 2014).

As a consequence, right structuring the board of directors would be one of the most significant pieces of determining the success for any business. These are those people you are getting to be

relying on for important position or voting on all important conclusions. It is important, therefore, to see their characteristics (Deeb, 2014). With this quality and increased firm size, the task of managing firms is growing into increasingly difficult. And those most eligible to help on the board are often unwilling. Some members think that there is little incentive to help. The advocates of appointing board members insist that the appointive method offers opportunity for greater selectivity in selecting board members, hence ensuring capable board members with specific expertise. Independence of board members help ensure balanced working relationship.

The issue of board of directors began to become an important discussion, especially in Indonesia which has experienced a prolonged crisis since 1998. The parties who said that the length of the process of repairing the crisis problem that occurred in Indonesia was caused by the very weak Board of directors implemented in companies in Indonesia, both the government and investors who began to give significant attention in the practice of Board of directors. Board of directors is a process used by company managers to increase corporate accountability in realizing value to shareholders in the long run to consider the interests of the company. Good Board of directors' functions as a rule governing the relationship between company management and shareholders regarding their rights and obligations. The implementation of good board of directors has become an issue that has attracted the attention of economists and business people in Nigeria since the financial crisis that struck Asia in 1997-1998 (Ajeng et al., 2019 & Setiawan et al, 2019, Nzewi et al, 2023).

Board of directors is one of the significant efforts to break away from the economic crisis that has hit Esqueda Nigeria. The role and demands of foreign investors and creditors regarding the application of the principles of Board of directors are one of the factors in making investment decisions in a company (Villalobos et al., 2018; Edna et al, 2021 & et al., 2019; Ching, 2020; Greene et al., 2020). The implementation of Board of directors in Indonesia is very important, because the principles of Board of directors can provide progress towards the performance of a company, so that companies in Nigeria are not oppressed and can compete globally.

This research provides a number of contributions. The results of the study identified the importance of current problems in Nigeria; the application of Board of directors has a positive influence on the company's stock prices in Nigeria, which focuses its attention appropriately on the operations of manufacturing companies. Findings indicate that the application of good Board of directors has an influence on the stock prices of manufacturing companies. Thus, this research broadens frontiers of knowledge of the application of Board of directors with the stock prices of manufacturing companies in Nigeria.

### **Literature Review**

Share prices can change up or down in a matter of time so can change in a matter of minutes or even change in seconds. Some conditions and situations that determine a stock will fluctuate including micro and macroeconomic conditions, company policy in deciding to expand, for example opening branch offices, sub- branch offices which are opened at home and abroad, the existence of directors or commissioners of companies involved in crime and cases, the company's performance that continues to decline at any time is a form of risk that occurs as a whole that causes the stock price to decline, the company went bankrupt, the withdrawal of shares by shareholders after creditors' rights were fulfilled (Le et al., 2020; Sharma et al., 2020).

A board of directors is the governing body of a company, elected by shareholders in the case of public companies to set strategy and oversee management. The board typically meets at regular intervals. A board of directors is essentially a panel of people who are elected to represent shareholders. Every public company is legally required to appoint a board of directors. The board is responsible for protecting shareholders' interests, establishing policies for management, oversight of the corporation or organization, and making decisions about important issues a company or organization faces.

In a broad sense, a board of directors acts as a fiduciary for shareholders. The board is also tasked with a number of other responsibilities, including the following: creating dividend policies; creating options policies; hiring and firing of senior executives (especially the CEO); establishing compensation for executives; supporting executives and their teams; maintaining company resources; setting general company goals and making sure that the company is equipped with the tools it needs to be managed well.

In this article, three characteristics of board of directors are discussed. They are boards diversity, board size and board independence. Board size is taken to refer to the total number of members serving on a firm's board. Board size is one of the most important and frequently used board dimensions which are used in studies. When boards are larger it can become harder for directors to express their opinions and points of view. A larger board can also create free-riding problems making it more difficult for board members to have a contribution to monitoring (Fernandes, 2017). Interestingly there are no consequences regarding the direction of the performance relationship that one would expect as a function of board size. Board size refers to the total number of members in the board of directors. Universal best board size has been identified by some studies. Factors such as organizational size, growth opportunities, legal requirements, demand conditions, board structure, financial strength, ownership structure, amongst others determine the size and composition of board (Dorger, (2011). However, researchers are unanimous in their view that factors such as costs implication, interest, experience, qualifications, financial strength, expected benefits should be the determining factors when considering board size Ferreira (2010). The Nigerian banking codes as well as the Securities and Exchange Commission of Nigeria code state that the members of a board should not be less than five, and the scale and complexity of operation of the company should be the key determining factors. The Securities and Exchange Commission code further states that factors such as integrity, compatibility, independence, diversity and availability to attend meetings should be considered (SEC – N, 2011:11). Similarly, the Central Bank of Nigeria (CBN) banking governance code gives an indication of expected minimum number of board size.

The presence of board independent on a firm's board as component of board structure in this study. This characteristic concern whether there are non-executive directors on a firm's board; the term can be used interchangeably with non-executive board members (Kiliç et al, 2015). Non-executive board members may ensure board independence from management, and improve the board's objectivity and its ability to represent multiple perspectives (Michelon & Parbonetti, 2012). Board independence is expected to be positively associated with board of directors, since independent directors are relatively less subjected to pressure from managers and shareholders than other directors their mission is to align the interests of shareholders, managers, and stakeholders (Lee, et al, 1992). Mallin and Michelon (2011) documented that a higher proportion of independent directors leads to a greater level of firms' financial performance.

Board independence is the state in which all or a majority of the members of a board of directors do not have a relationship with the company except as directors. For example, they may not be relatives of the company's founders, key players or major employees. In the Nigeria, the SEC and individual exchanges require board independence. Board Independence is corporate governance concept that calls for a majority of board members to be independent from the company (Amahalu, et al.,2017). Independence occurs when a board member has not been and is not currently employed by the company or its auditor and the board member's employer does not do a significant amount of business with the company, each company creates its own definition of significant.

Board diversity has gained considerable academic, political, and media attention at both national and global levels in recent years. Researchers, policymakers, and practitioners suggest that well-structured boardrooms enhance the performance and organizational policymaking for all companies (Li, et al., 2020). Board diversity can assist firms in gaining different information and wider exposure to the environment from suppliers, customers, policymakers, as well as social groups and competitors. Moreover, board diversity enhances board independence and decision-making quality as it takes the views of underrepresented groups into account. Board diversity represents an important corporate governance structure in order to realize efficient and effective management and monitoring within companies. Thereby, the consideration of diversity when selecting the board of directors is essential to companies. The board of directors is usually a form of control mechanism used by organizations internally to control the appointment, supervision and remuneration of top management in institutions besides strategy formulation.

Board diversity is positively related to business performance. Women with characteristics who are more careful and details will be considered able to reduce the aggressiveness of men on the board of directors. Gender diversity will impact companies that are more controlled and cautious in carrying out risky expansions. With more control of the company, the profitability performance is also getting better (Kılıç & Kuzey, 2019; Lagos Cortés et al., 2018). Women on board can convince stakeholders about its diversity, increase its legitimacy, and connect with the external environment. Meanwhile, there is a growing perception that women with soft and emotional characteristics can make surveillance ineffective. The dominance of men in the world of work creates a gender bias so that not many women can reach positions on the board of directors. The presence of women is not effective in improving company performance as measured by using ROE. The reasons are that first; the presence of women is only a complementary role in corporate board structure. Second, the law regarding gender diversity is still minimal. Women are also considered to be emotional, aggressive, risk-averse, and insecure (Lagos Cortés et al., 2018).

Eluyela, et al (2018) investigated the impact of board size on firm performance of deposit money banks in Nigeria. The populace of this study covers the fifteen (15) registered deposit money banks on the Nigerian Stock Exchange (CBN, 2017) for the period of (2011-2016). Data used for the study were spawned from annual reports of the deposit money banks listed on Nigeria stock exchange (NSE) market. Data were explored using panel regression analysis. The study showed that board size was positive and not significant and firm size was negative and significant. The finding can only be useful to deposit money banks Nigeria.

Obayemi (2020) the effect of corporate governance on the Industrial goods sector performance in Nigeria. Within the period of six (6) years spanning 2014 – 2019 using the panel regression approach for the explanatory variables. The relationship of corporate governance index [Board Composition (BCP), Audit Independence (AID), Board Independence (BID), and Audit Committee

Composition (ACC)] and industrial goods firms' performance as measured by ROA differs. The method through which data were gathered and sampled to facilitate this research was the secondary method of data collection in which information was sourced from the Annual reports of the companies studied. In analyzing the data, the researcher made use of correlation and regression to establish the relationship between corporate governance and firm's financial performance. The findings showed non-significant relationship between board independent and financial performance of the industrial goods firms. The study only limited to return on assets as dependent variables.

Sani (2021) examined the effect of board diversity on financial performance of the Nigerian listed firms. The effect of board diversity on organizational performance has continued to be given attention by policymakers, non-governmental agencies, and academic communities. It has been established that boardroom diversity enhances the corporate boards' monitoring capacity and mitigates the agency costs, which positively influences the firms' performance. Despite the advantages of constituting diverse boards, the corporate board structure framework guiding the operations of such firms does not contain any specific requirement on board diversity. The study utilized the balanced panel data of 70 firms for a period of 8 years (2012 to 2019) using a two-step system generalized method of moments (GMM) framework. This study indicates a positive and significant relationship of board gender diversity (BGD) and foreign directors (FD), with financial performance. However, the effect of CEO financial expertise on the firms' return on assets (ROA), return on equity (ROE), and return on sales (ROS) appear positive but insignificant. Consequently, the Nigerian listed firms should attach more value to constituting a smaller board size with a considerable number of female and foreign directors to maximize their performance. Hence, empirical studies need to stress more on the relevance of boardroom diversity to firms' value in the Nigerian context.

This study is underpinned by Stakeholder theory was propounded by Freeman (1984). The stakeholders' theory attempts to address the questions of which group of stakeholders merit the attention of management. The stakeholders' theory proposes that companies have a social responsibility that requires them to consider the interest of all parties affected by their actions.

Stakeholder theory considers the nature of the relationships between firms and anyone who affects the processes and outcomes of the firm and its stakeholders. The theory considers how a business creates value and wealth for its stakeholders (customers, suppliers, employees, communities, financiers, shareholders, banks and so forth) by converting their stakes into goods or services. Thus, stakeholders have essential value and the power to push the firm to reach its goals.

The stakeholders' theory was adopted to fill the observed insufficiency created by omission found in the agency theory which identifies shareholders as the only interest group of a corporate entity and to help in analyses and understanding of how composition of board structures affects wealth maximization in terms of return on equity.

## **Methodology**

The study adopts Expo-factor research design. This is because this study makes an enquiry into the possible influence of one variable on another using secondary data, the effect of the independent variable on the dependent variable. The population for the study consists thirteen listed industrial goods firms on Nigeria Exchange Group with up-to-date data for the period of 10 years (2013-

2022). This study data was extracted from published annual reports and accounts of the selected firms. Panel data involving data requirement for variables of (13) industrial goods firms for the period of ten (10) years. The panel regressions were used to examine the relationship between the dependent and independent variables. The following panel regression model was used to examine the research propositions of the study:

$$FV = \beta_0 + \beta_1 BD_{it} + \beta_2 BS_{it} + \beta_3 BI_{it} + \epsilon_{it}$$

Where

FV= Firm Value; BD = Board Diversity; BS = Board Size; BI = Board Independent;  $\beta_0$  = Coefficients of independent variables.

## Results and Discussion

The data used for the study is described in terms of the minimum, maximum, mean, standard deviation and number of observations. This is summarily presented in table1

**Table1 Descriptive Statistics**

Variables	Mean	S D	Min	Max
FV	.1569929	.0836722	.0284468	.417649
BD	.1500137	.1210261	0	.3636364
BS	9.183333	2.569973	6	16
BI	.2029571	.0886976	.0833333	.4545455

Source: stata Output 2023

Table1 reports the descriptive statistics for the dependent and independent variables. The table reveals that the minimum value of performance of the firms is about 2.8%. The maximum value is 41.8%, representing the maximum rate of firm value of the industrial goods firm in Nigeria. The mean value of about 15.7% as can be seen in the above table suggests that on average, the studied firm's value is approximately 16%. This is with a standard deviation of 8.3% implying the variability among the selected industrial goods firms.

From the table1 it is seen that the proportion of women on the boards range from a minimum of 0.0000 to a maximum of 3.6% and a mean of 15%. This shows that the women representation on the board of the sampled companies is very poor. This is because the average representation is only 15%. The minimum of 0.000 proves that some companies did not include women in their team of Board of Directors during this period of study; and for those that included women, the maximum representation is only 36%. The standard deviation of 12.1% indicates the deviation between companies is low. This shows that representation of women on the board is poor across the sampled companies. However, representations of women tend to be low even in the developed economies. Table1 also shows that the board of director's size (BS) of the selected industrial goods firms in Nigeria has a minimum and maximum value of 6 and 16 respectively. On average, the sampled firm have a board size of 9 with standard deviation of 2.6% This implies that the data in the sampled firms deviate from the mean by 2.6%.

The table1 also indicates that the board of directors' independence (BI) of listed industrial goods firm in Nigeria has an average value of 20% with standard deviation of 8%. This implies that on average 20% of the total directors sitting on the board of the industrial goods firms in Nigeria are

outside/non-executive/independence directors. The minimum and maximum proportions of BI are 8% and 45% respectively.

**Table 2 Correlation Matrix**

	BD	BS	BI
BD	1.0000		
BS	0.0383	1.0000	
BI	0.0880	0.1272	1.0000

**Source:** stata output 2023

Table 2 presents the correlation of the variables, in terms of the association between the independent variables and the dependent variable as well as the correlation among the independent variables themselves.

The table reveals that there is a positive correlation between the dependent variable, firm value (FV) and three explanatory variables: BD, BS and BI with coefficients of 0.0383, 0.0880, and 0.1272 respectively. This implies that the three explanatory variables move in the same direction with (FV) firm value, which means that the higher their values the higher the firm value.

### Hausman Specification Test

To decide whether to adopt the fixed effects model (FEM) or the random effects model (REM), Hausman specification test was carried out to select the preferred model. It basically tests whether the unique errors (term error) are correlated with the repressors'. The result is presented in table 4.6. of the test reveals that the Ch2 value of 2.82 has a probability of 0.8308 and as such, it is not significant at the 5% level. As such, the result of the random effects model was adopted for the study. Likewise, the Breusch and Pagan lagrangian multiplier test for random effect was also conducted to choose between the random effect result and OLS regression. The result revealed that the chi2 value is 6.14 with  $\text{prob} > \text{chi2} = 0.0066$  The result indicated that the best model to be interpreted is the random effect regression model.

**Table3 Summary of Fixed Effect Regression**

VARIABLES	Beta Coefficients	Z-Value	Probability
BD	.0225131	0.19	0.847
BS	0.15973	14.17	0.000
BI	.0471386	5.71	0.000
_cons	.3768873	4.06	0.000
Wald chi2	96.89		
R-Squared	0.2749		
Prob.	0.0004		

**Source:** stata output 2023

The table displayed that board diversity has a coefficient of. 02251009, z- value of 0.13 and p-value of 0.847 which explains a positive but insignificant relationship with firm value. This implies that any 1% increase in board diversity results to 02251% change in firm value that is, as board diversity increase, there is an increased in firm value holding all other variables constant, even

though there is no statistically significant proof. Thus, this research fails to reject the null hypothesis one which states that board diversity has no significant effect on firm value of listed industrial goods firms in Nigeria.

The regression results further reveal that board size has positive and significant effect on firm value of listed industrial good firms at 5% significant level. This can also be observed from the statistical z-value of 14.17 with probability value of 0.000. This shows that increase in board size on the board significantly increase the firm value of the listed industrial goods firms in Nigeria. The beta coefficient of 0.15973 indicates that firm value will increase by 16% with an increase of board of director. The finding serves as a base for the rejection of the null hypothesis two, which states that board size has no significant effect on firm value of listed industrial goods firms in Nigeria.

Board independence can be seen to be positively and significantly related with firm value with a coefficient of .0471386, z-value of 5.71 and a p-value of 0.0000. An increase in proportion of non-executive directors of a firm will increase the value of firm of listed industrial goods in Nigeria. Based on this, the study rejects the null hypothesis three which states that board independence has no significant effect on firm value of listed industrial goods firms in Nigeria.

From the regression result presented shows that the  $R^2$  which is the multiple co-efficient of determination gives the percentage or proportion of total variation in the dependent variable firm value which is jointly explained by the independent variables to be approximately 0.2749. This signifies that 27% of total variation in board characteristic of listed industrial goods firms in Nigeria is explained by changes in BD, BS and BI while the remaining, change is caused by other factors not captured in the model. The cumulative result hold way as the F-statistic has a high value of 96.8 which is significant at 5%. This means that the model is well fitted with the variables selected. It further means that the selected variables are the major determinants of board characteristic of the listed industrial goods firms in Nigeria.

### **Conclusion and Recommendations**

based on the finding, the study concluded that board characteristic has significant effect on firm value of listed industrial goods firm in Nigeria, except for board diversity which was found to be positive but insignificant effect on firm value. Based on the foregoing, the study recommended that industrial goods firms should promote diversity and inclusion throughout the organization. By fostering diversity in all levels and departments, companies can benefit from a wider range of perspectives, which may ultimately contribute to improved firm value. It is also recommended that industrial goods firm should carefully consider their board size and aim to find an optimal balance. Increasing board size within reasonable limits can lead to improved firm value. However, it is important to avoid an excessively large board, as it may become unwieldy and hinder effective decision-making. Finally, the study recommended that industrial goods firms should prioritize increasing the level of board independence. This can be achieved by appointing more independent directors who have no affiliation or conflicts of interest with the company or its management. Independent directors can provide unbiased perspectives, contribute to effective decision-making, and enhance overall board effectiveness.

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