

BOARD ATTRIBUTES AND FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA

Nadima Bashir Abdullahi

Department of Business Administration and Entrepreneurship

Faculty of Management Sciences

Kaduna State University

+2347044440332, nadimababdullah@gmail.com

Abstract

The study examined the effects of board attributes on financial performance of listed manufacturing firms in Nigeria for the period of 2020-2024. The study used correlational research design. The study used data extracted from annual reports of listed manufacturing firms in Nigeria. The study was anchored on the agency theory and resource dependence theory. The population of the study comprised of the 26 listed manufacturing firms. The adjusted population was 24 listed manufacturing firms in Nigeria. The data collected were analyzed with the aid of GLS multiple regression technique. The study found that board size and board independence have a significant effect on the financial performance of the listed firms. Based on the findings, The study recommends the use of large proportion of independent non-executive directors in the composition of board of directors to ensure proper monitoring of management. The study also recommends that listed manufacturing firms in Nigeria should sustain reasonable large number of board as it has been revealed that a larger board has positive impact on their financial performance.

Keywords: *financial performance, board independence and board size*

1.1 Introduction

The financial performance of an organization is a critical concern for stakeholders because it reflects the effectiveness and efficiency of management in executing operational activities. Financial performance serves as an indicator of a firm's ability to generate profits, manage resources efficiently, and sustain long-term growth (Brigham & Houston, 2021). One of management's primary goals is to enhance both current and future financial outcomes, as these directly influence the firm's market value and ultimately maximize shareholders' wealth (Jensen, 2001). When a company demonstrates strong financial results, investors tend to reassess its growth potential positively, leading to increased demand for its shares and a rise in stock prices (Ross et al., 2019).

In the manufacturing sector, financial performance is often used as a measure of managerial efficiency, particularly in relation to the effective allocation and utilization of production resources (Pandey, 2015). The manufacturing industry plays a significant role within Nigeria's broader economic and financial system, contributing to employment generation, industrial growth, and economic diversification. Consequently, regulatory and structural reforms are frequently introduced to strengthen operational efficiency and improve financial outcomes within the sector (Sanusi, 2012). These reforms aim to enhance competitiveness, attract investment, and ensure sustainable performance in the Nigerian manufacturing industry.

The manufacturing industry is part of the immune system and reform in the economy, and the successful operation of the industry can lead to progress in other industries and economic

development. However despite the long history of manufacturing industry in Nigeria, the sector's operational efficiency has remained sub-optimal. The capitalization of manufacturing companies that are listed on Nigeria stock exchange is poor and their market performance indicates that most of the listed manufacturing firms haven't done very well because of their weak financial performance (Okunlola, 2021). The Nigerian Manufacturing Sector is often regarded as the most under-performing in the financial sector, especially if you compare it to other manufacturing sectors across the world. At a combined market capitalization of about N146 billion it pales in comparison to the banking sector, with a market capitalization of N2.4 trillion (Nairametrics, 2021).

According to Afrinvest (2018) the recovery in the global macro-economy trickled into the manufacturing sector in 2021, global non-life premiums increased moderately, growing by 3.0% in 2021. However, despite efforts by the companies themselves and the regulatory authorities, the revelation was that the financial performance of the Nigerian manufacturing companies can be described as suboptimal as Statistics showed that Return on Average Assets (ROAA) of the industry declined from an average of 8.5% in 2016 to 7.0% in 2021. These contractions were largely due to higher claims and operating expenses witnessed in the period under review. The manufacturing sector remains shallow in terms of Gross Premium Written when placed beside select countries with similar structures and demographics (Afrinvest, 2018). Many companies are aiming at achieving added value through Governance, Risk and Compliance (GRC) initiatives. A number of internal and external factors have been identified to influence the financial performance of manufacturing companies by different commentaries. The shrinking profit pool and the overall performance of our industry can only be checkmated by adoption of best practices, governance structure and innovation (Ogunbiyi, n.d.).

Corporate governance refers to the manner in which companies are directed and controlled through the board of directors. The National Manufacturing Commission (NAICOM) Code of Good Corporate Governance sets out the composition, duties and responsibilities of the board as well as standards expected of board members. It is the function of the board of directors to monitor the activities of a company. It sets the corporate strategy, appoints and supervises senior management, and functions as the main corporate governance mechanism. Extant literature indicates that boards of director's plays an important role in influencing and monitoring firm performance, with regard to determinants including board size, board independence, and female directorship. Appointment of independent directors will ameliorate agency conflict in two ways: first, by aligning managerial interests to that of shareholders; and second the presence of independent directors increases the monitoring mechanism in the firm thereby enhancing performance (Boateng, Bi, & Brahma, 2021). The level of gender diversity affects the board decisions and might also contribute to the discussion, exchange of ideas and performance of the group (Gray, Kang, & Cheng, 2007). Female directors may better understand particular market conditions than men, which may bring more creativity and quality to board decision-making. Board attributes mechanism is relevant in manufacturing companies, as it enhances trust and confidence in the stakeholders, improves firm's profitability, protects stakeholders' interest by aligning their interest with that of the managers, and facilitates growth of the manufacturing industry.

Several studies have been conducted on board attributes and financial performance in developed nations (Bennouri, Chtioui, Nagati, & Nekhili, 2018; Boateng et al., 2021; Cavaco, Challe, Crifo, Rebérioux, & Roudaut, 2016; Liu, Miletkov, Wei, & Yang, 2015). However, the studies done have focused on other companies other than manufacturing service providers. Studies conducted on board attributes and performance in Nigeria (Garba & Abubakar, 2014; Ujunwa, 2012) examine the impact of board attributes on financial performance not financial

performance. Finally, while other studies on board attributes neglected the financial performance variable as proxies for performance, this study fills the gap in literature by employing the accounting financial performance variables to investigate the existence if any relationship between board attributes and financial performance of listed manufacturing companies in Nigeria. The problem of insufficient studies of the assessment of the relationship between board attributes and the financial performance of Manufacturing companies in Nigeria calls for more work under the subject matter. Therefore the objective of this study is to ascertain the extent to which certain board attributes dynamics in the code of good corporate governance for the Nigerian Manufacturing industry affect the financial performance of listed manufacturing company. Based on the objective we hypothesized that board independence, female directorship and board size have no significant impact on the financial performance of listed manufacturing company in Nigeria. In this paper, we employ three board monitoring mechanisms (board size, independent directors, and female directorship) to investigate the financial performance of listed manufacturing company in an emerging country context. The sub-optimal performance of the manufacturing industry which has persisted despite the reforms has provided the impetus to this research work. The research is paramount as there are few researches in relation to the board attributes and financial performance.

The remaining part of the paper is divided into four sections. Section two reviews the literature. Section three presents the methodology used in addressing the research objectives. Section four presents the data analysis while section five presents the conclusion and recommendations.

2.1 Literature review

Corporate governance has become an important issue which has received wide attention of government, firms, law makers and researchers for more than three decades. Chen and Al-Najjar, (2012) sees that the board of directors as the focal point of the corporate governance system. Corporate board attributes and its effect on firm performance is one of the most researched areas in contemporary corporate finance. It is expected that the firms which complied with best corporate governance practices would perform well. It is widely understood that corporate governance structures influence corporate firm performance. In this case, performance may be either operating based performance or market based performance. Core, Rusticus, and Wayne, (2004) suggest that operating performance is a better measure for examining performance and corporate governance. Financial performance reflects the impact of many factors including efficiency of the management and the success of monitoring and advisory role of the board and it remains the traditional indicator of corporate performance (Kiel & Nicholson 2003). The board of directors (BOD) is central to the link between corporate governance and performance of the management

Board of directors is an internal control mechanism that is essential for monitoring top management (Fama & Jensen, 1998). Board performance of its monitoring duties usually is influenced by the effectiveness of the board. The effectiveness of board of directors in monitoring managers and exercising control on behalf of shareholders depends on a number of factors: The number of people that make up corporate board will determine how effective it discharges its responsibilities in corporate governance. As considering the board size, "there is a trade-off between additional value-added expertise or monitoring benefits and disadvantages stemming from the coordination problem. In addition to board size, board independence stands as an indispensable trait that a firm has to possess to maintain an efficient corporate governance mechanism. Board independency means the proportion of independent non-executive directors relative to the total number of directors. (Nahar Abdullah, 2004). Board diversity defined as the inclusion of persons of both genders within the organizational structure (Brickley, Lease, & Smith, 1988).

Empirical Review

There were mixed results achieved by previous studies on the relationship between board attributes and financial performance of companies. Based either explicitly or implicitly on the above rationale, many studies have examined the link between independent director, board size and board gender on financial performance, providing mixed results.

Board Independence and Financial Performance

Boateng and Brahma (2021) employ board monitoring mechanisms and within-firm governance variables to investigate the financial performance of 340 mergers and acquisitions in China over the 2004–2011 period. Their findings revealed that independent directors have a positive and significant impact on financial performance of acquiring firms. Specifying that the role of independent directors has improved the monitoring function of independent directors and performance of Chinese firms.

Cavaco, Challe, Crifo, Rebérioux, and Roudaut (2016) studies the relationship between board independence and firm financial performance in French listed companies. Using a sample of 4093 distinct directors, holding 4966 directorships (i.e. director–firm pairs). Estimates of GMM regressions for board attributes variables were used to control for relevant sources of endogeneity. Their study documented a significant negative relationship between independence and accounting performance. Their result suggests that, in the French context, the costs of independence (i.e. the informational gap supported by independent directors compared to insiders and affiliated directors) outweigh the benefits of independence (i.e. the reduction in agency costs). However their study did not directly consider board members' educational networks, which have been shown to play an important role in France panel system.

Liu, Miletkov, Wei, and Yang (2015) Investigated the impact of independent directors on firm performance in China. They used a panel data set covering more than 16,000 firm-years to investigate the effect of board independence on the performance of Chinese listed firms.

Using several econometric techniques specifically designed to address the inherent endogeneity in the independence-performance relationship, they found that the degree of board independence is positively and significantly related to firm financial performance. They further document that the positive relationship can be attributed, at least in part, to the ability of independent directors to prevent insider self-dealing and to improve investment efficiency in Chinese listed firms.

Nguyen, Evans, and Lu (2021) investigated the impact of independent directors on firm performance in Vietnam. Using a sample of 217 non-financial Vietnam-listed companies during the period from 2010 to 2014, this study uses OLS regressions to estimate the relationship between independent directors and firm performance. Two econometric techniques – the fixed effects estimation and the difference in difference estimation - are used to control for endogeneity. The results reveal that independent directors have an overall negative effect on firm financial performance. This finding may be due to information asymmetry, expertise disadvantage and the dominance of ownership concentration that prevent independent directors from fulfilling their monitoring function in governance.

Board Size and Financial Performance

Yeşilova and Okur (2018) analyzed the impact of corporate governance applications on financial performance and share performance of the 129 non-financial firms in Borsa Istanbul for the 2007 and 2014 period. The results of the regression show board size affect financial performance positively and significantly which is in line with the resource dependence theory.

When the number of the members in the board increase, the ability of the firm to reach to resources and information increases.

Zedan and Abu Nassar (2015) examine the relationship between corporate governance mechanisms and financial performance using Return on Assets. This study examines the relationship between firm performance and board size among other variables. A sample of 69 manufacturing Jordanian firms listed in the Amman stock exchange for a period of five years from 2005-2009 are examined. Panel data methodology is employed; the method of analysis is multiple regressions and the method of estimation is OLS. The study reveals the total number of the board of directors has significant positive effect on the financial performance.

Ahmed and Hamdan (2015) examined the impact of corporate governance policies on firm performance in Bahrain Bourse. The study sample contained 42 out of 48 of Bahrain's companies which were listed in Bahrain Bourse during the period from 2007-2011. The descriptive results indicate that our sample firms fulfill corporate governance variables about 61.2% for the entire study period. The empirical results indicate that size of the board directors found to have a positive impact on ROA. In addition, ROA ratio demonstrates the efficiency of management in using the firm's total assets to generate income.

Gender Diversity and Financial Performance

Mandala, Kaijage, Aduda, and Iraya (2018) determined whether gender diversity of boards affects performance. Secondary data was collected for a ten-year period from 2006 to 2015 from 98 sampled financial institutions. Multiple regression analysis and generalized estimating equations were used in analysis of the collected data. The study was anchored on the agency theory, stakeholder theory, the human capital theory and resource dependence theory. The results show that, gender diversity of has no independent significant influence on performance of financial institutions.

Hussain and Hadi (2021) determine if there is any significant relationship between gender diversity and firm performance measured by return on assets (ROA) among companies registered among one large government industry (Construction Industry Development Board – CIDB) in Malaysia. Quantitative survey method was employed and data are collected from 124 companies. Descriptive statistics is reported and model estimation is performed using logistic regression. The results show that gender diversity has no significant impact on performance

Bennouri, Chtioui, Nagati, and Nekhili (2018) examined the relationship between board gender diversity and firm accounting based performance. They used a sample of 394 French firms, and collect financial and board attributes data from 2001 to 2010. They found that female directorship significantly increases ROA. We postulate that these relationships are affected by the attributes of female directors.

Alabede (2016) investigates the relationship between internal corporate governance structures and firm performance and how this relationship is moderated by the influence of board diversity. The data of the study, which were extracted from annual reports of the UK FTSE 350 firms, were treated statistically using OLS-moderating multiple regression analysis. The coefficients provide evidence that the proportion of outside directors, board size, board diversity are significantly positively related to financial performance (ROA).

The studies cited in the literature review mostly concentrate on the developed countries whose strategic approach and corporate governance systems are not similar to that of Nigeria. In Nigeria the studies done in financial services sector have focused on other companies other than manufacturing service providers in Nigeria

Theoretical Framework

This section explains the related theories on which the study is based. There are a number of theoretical perspectives which are used in explaining the relationship between board attributes and financial performance. The agency and the Resources Dependence Theory are used to underpin the study

Agency Theory

Jensen and Meckling (1976) stated that the agency relationship is a contract between the manager and the investor. This theory studies the relationship between the principal and the agent. The principal refers to the owner of the company or shareholders, while the agent refers to the manager of the company. The company oversight management mechanism can be used to reduce the conflict or agency problems. Agency theory states that conflicts of interest and information asymmetries that arise can be reduced by a proper monitoring mechanism to align the interests of the various parties within the company. One of the tools used is good board attributes. The primary responsibility of a board is to monitor the management and protect the shareholders from any conflict of interest that arises due to the separation of ownership and control (Jensen & Meckling, 1976). The divergence of the objective of managers and shareholders leads to agency cost. Effective monitoring can bring down these agency costs, thereby improving firm performance. Agency theory suggests that the above task is facilitated by a board whose composition reflects a greater proportion of outside independent directors since such composition could represent a more effective way in monitoring and controlling managerial actions (Byrd & Hickman, 1992). The Agency theory recommends a large number of independent outside directors on board to enhance the board's independence and to discharge its oversight role effectively (Donaldson & Davis, 1991). Good governance improves managerial monitoring and decision-making, as well as reduces managerial expropriation and wastage, and thereby enhances financial performance and market valuation (Renders, Gaeremynck, & Sercu, 2010). The rationale is that independence is likely to guarantee better monitoring of the management team and contribute to improved performance. Independent directors are widely believed to be better monitors of managers as they strongly value maintaining their personal reputation in the directorship market (Fama & Jensen, 1998).

The Resources Dependence Theory

Resource dependence theory holds that the operational environment of the firm is reflected in its board attributes (Hillman, Cannella Jr., & Harris, 2002; Pfeffer & Salancik, 1977), which entails that directors are selected according to their ability to facilitate access to required resources. The resource dependence theory proposes that the board of directors is a mechanism for reducing transaction costs associated with environmental interdependency, helps managing external dependencies and reduces environmental uncertainty (Hillman et al., 2002). Firms with larger and/or more diverse boards are expected to have greater access to resources that can be translated into improved financial performance. According to the resource dependence theory, these resources, often referred to as board capital, increase with board size. Dalton et al. (2015) support large board size and they argue that large board will expose firms to great business connections and critical resources. According to Resource dependency theory female directors bring unique and valuable resources and relationships to their boards. Resource dependence theory favors large board size, presence of women on board to make connections with the firm's external environment (Ujunwa, 2012)

3.1 Methodology

The study adopted the correlational research design. The design is informed by the research paradigm which is the positivism approach. The population of the study comprised of all the twenty-six (26) manufacturing firms listed on the Nigeria stock exchange (NSE) of which two

companies were filter out due to availability of data in the annual financial reports of the firms for the period under study i.e., 2020-2024. The financial data used for the study is secondary in nature obtained from the annual reports, where the board attributes consists of board size, board independence and board gender as independent variables of the study, while financial performance is considered as dependent variable. The study used data extracted from secondary source based on the annual reports of 26 listed manufacturing companies.

Based on the variables of the study, this research employed multiple regressions on the panel data. This is because, this method is found suitable for this study since the issue of linearity is fulfilled. The study employed Generalized Least Square. This is because, the study suffered from heteroskedasticity thus, making random effect model inappropriate since their parameters could be biased as a result of the presence of heteroskedasticity (Alzoubi, 2016; Boadi & Li, 2015; Wooldridge, 2002).

The study comprises the explained variable and explanatory variables. Thus, the dependent variable which is financial performance(ROA) is measured using operating income divided by end of year total assets as supported by Alabede (2016). The operating ROA reflects how well a company management is using the company real investment resources to generate profits. The higher operating ROA reflects higher managerial efficiency of the company's and vice versa.

The explanatory variables for this study comprises three board attributes mechanism (board size, board independency and board gender). Board size (BSIZE) is measured as total number of directors on the board as supported by Zedan and Abu Nassar (2015). Board independency (BIND) is measured as the proportion of independent non-executive directors to the number of directors on the board of company each year as supported by Boateng and Brahma (2021). Board gender (BGEN) is measured as the proportion of women directors to the number of directors on the board of company each year as supported by Alabede (2016).

Firm size (FS) is used as the control variable which is measured by the total value of each manufacturing company's assets. Because the values for total assets were too large for the regression analysis, then log of the assets was used to reduce the values. The size of the firm affects its financial performance in many ways. Large firms can exploit economies of scale and scope and thus being more efficient compared to small firms.

Therefore, the model of the study is expressed below;

$$ROA_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BGEN_{it} + \beta_3 BSIZE_{it} + \beta_4 FSIZE_{it} + E_{it} \dots\dots\dots \text{equation 2}$$

Descriptive statistics is used on the data collected where the mean distribution and standard deviation of both the dependent and explanatory variables are considered. In addition, the correlation and variance inflation factor (VIF) are also calculated to determine the multi-collinearity issues. The regression model is estimated Generalized least squares technique which according to J.m.wooldridge (2011) provides a consistent estimate of β_0 (intercept) and β_{1-2} (slopes).

Where;

ROA = Financial performance

BIND = Board independency

BGEN = Female directorship

BSIZE = Board size

FSIZE = Firm size

E = Error term

i indicator for cross sectional data

β_0 denote constant of the model

β_1 is the parameter of BIND

β_2 is the parameter of BGEN

β_3 is the parameter of BSIZE

4.1 Results and Discussion

Table 4.1: Summary Statistics of the variables.

Variable	Obs	Mean	Std.Dev.	Min	Max
ROA	130	.023	.098	-.701	.204
BIND	130	.095	.077	0	.429
BGEN	130	.166	.139	0	.571
BSIZE	130	8.722	1.86	4	14
FSIZE	130	2.09e+10	1.79e+10	1.80e+09	9.24e+10

Author's computations generated with Stata 13 software

Table 4.1 provides a summary of the descriptive statistics of the dependent and independent variables for the sampled listed manufacturing companies in Nigeria. This shows the average indicators of variables computed from the financial statements. The financial performance measured by operating return on asset (ROA) reveals an average of 23 percent. The minimum and maximum values of return on asset are -0.701 and 0.204. That means the maximum losses incurred by the listed manufacturing firms is -N0.701 on each N1 of asset investment and the most profitable listed manufacturing companies earned N0.204 of income from a single N1 of asset investment. The standard deviation of ROA of 0.98 shows high variability across listed manufacturing companies.

The mean for board size indicates that the average board size is approximately 9 members with the standard of deviation of 1.86, which shows low variability across the listed manufacturing companies. The minimum and maximum members are 4 and 14 members respectively. The board independency shows minimum and maximum values of 0.00 and 0.429 respectively. Also the average board independency of listed manufacturing companies revealed a mean value of 0.095 and standard deviation of 0.077. For female representation on the board the mean value is 0.166 with a standard deviation of 0.139, the minimum value is 0.00 and the maximum value is 0.571. The minimum value of 0.00 means that there are some years that manufacturing companies had no females on the board. The maximum value of 0.571 suggests that insurer never had more than 57.1% of their board members as females within the period of study. The firm size represented by total asset which serves as control variable have a mean of ₦20.9

billion with a standard deviation of 17.9 billion a minimum and maximum value of ₦1.8 billion and ₦92.4 billion respectively.

Table 2: Correlation Matrix of the Variables

Variables	ROA	BIND	BGE N	BSIZ E	FSIZ E
ROA	1.000				
BIND	0.211 *	1.000			
	0.011				
BGEN	-0.055 0.514	-0.019 0.820	1.000		
BSIZE	0.203 *	-0.107	- 0.274 *	1.000	
	0.015	0.201	0.001		
FSIZE	0.325 *	0.171 *	-0.091	0.236 *	1.000
	0.000	0.040	0.280	0.004	

* shows significance at the .05 level

Author's computations generated with Stata 13 software

Table 2 shows the correlation between the dependent variable and the independent variables on one hand and among the independent variables themselves on the other. The table reveals a positive significant relationship between the dependent variable ROA and two explanatory variables BIND and BSIZE with coefficients of 0.211 and 0.203 respectively. This implies that board independency and board size move in same direction with the financial performance. Female directorship on the other hand has a negative and insignificant relationship with the financial performance. With respect to association among the independent variables themselves, the table reveals that board independence and firm size, board size and board independence are positively correlated among themselves. On the other hand board independence and female directorship, board size and female directorship, board size and board independence, female directorship and firm size are negatively related among themselves. According to Gujarati (2004) a correlation coefficient between two independent variables above 0.80 is considered excessive. From the table above, it can be seen that all correlation coefficient between independent variables are below 0.80. This suggests the possible absence of harmful multicollinearity. This is also confirmed considering the Variance Inflation Factor (VIF) result, which provides evidence of absence of collinearity. The highest value is 1.166 and the mean VIF is 1.103 indicating no multicollinearity. This is because the VIF values are less than 5 and the inverse of the VIF is greater than 0.01 then the explanatory variables are said to be collinearity free (Gujarati, 2004). Thus, this study assumes no multicollinearity on the said independent variables. Meanwhile, the OLS regression estimate is presented in Table 4 for the establishment of the relationship between the dependent and each of the independent variables.

Table 3: Regression Results

Dependent Variable: ROA Method: GLS

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
BIND	0.236	0.100	2.36	0.018	0.040	0.433	**
BGEN	0.013	0.057	0.22	0.825	-0.098	0.124	
BSIZE	0.009	0.004	2.02	0.043	0.000	0.017	**
FSIZE	0.070	0.022	3.17	0.002	0.027	0.114	***
Constant	-0.584	0.155	-3.78	0.000	-0.887	-0.281	***
Mean dependent var		0.023	SD dependent var		0.098		
Number of obs		144.000	Chi-square		26.449		
Prob > chi2		0.0000	Akaike crit. (AIC)		-274.427		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ *Author's computations generated with Stata 13 software*

From the result of the regression estimation presented in Table 3 the model of the study is represented below,

$$ROA_{it} = -0.584 + 0.236BIND_{it} + 0.013BGEN_{it} + 0.009BSIZE_{it} + 0.070 FSIZE_{it}$$

The model has constant (β_0) value of -0.584. This means that in the absence of BIND, BGEN, BSIZE and FSIZE, the β -value is -0.584 which is significant at 1%

The result in table 3 shows the result obtained from Generalized least square (GLS) which was interpreted after conducting all relevant tests. In view that the dataset is panel nature, the paper runs both fixed effect and random effect models. Hausman specification test was carried out to enable selection of the best model for analysis. The test was insignificant so we conducted the Lagrangian Multiplier test which helps determine the best model to interpret between the random effect model and the pooled OLS. The result obtained showed that the random effect model is the most appropriate. However the study employed Generalised Least Square. This is because, the study suffered from heteroskedasticity thus, making random effect model inappropriate since their parameters could be biased as a result of the presence of heteroskedasticity (Alzoubi, 2016; Boadi & Li, 2015; Wooldridge, 2002). The result obtained revealed the values of all the variables are at 1% significant level. This suggests that the models are statistically fit to predict the financial performance.

The result obtained shows that the coefficient of board independency is positive and statistically significant at 5%. This implies that an increase on independent non-executive directors by one member on board will improve financial performance by the value of 0.236 with the econometric assumption of other things remain constant. The findings is in line with (Boateng et al., 2021; Liu et al., 2015) This result also supports the proposition of the Agency Theory, which suggests that board dominated by independent non- executive directors are likely to be efficient in its advisory and monitoring role and which in turn, will have impact on corporate performance. Hence, we reject the null hypothesis that there is no significant relationship between board independency and financial performance of listed manufacturing company in Nigeria. From the model also, female directorship has positive relationship with the financial performance, however it is statistically insignificant. This implies that an increase in number female directors by one member on board will have no impact in the financial

performance with the econometric assumption of other things remain constant. The findings is in line(Hussain & Hadi, 2021; Mandala et al., 2018). However, the result does not support the findings of (Alabede, 2016; Bennouri et al., 2018). This result does not support the proposition of the resource dependency theory. Hence, we fail to reject the null hypothesis that there is no significant relationship between female directorship and financial performance of listed manufacturing company in Nigeria.

Also, the result shows that board size have a positive effect on financial performance and significant at 5%. This implies that an increase in the number of directors on the board will increase the financial performance by the value of 0.9% with the econometric assumption of other things remain constant. Prior literatures have also supported a positive significant relationship (Ahmed & Hamdan, 2015; Yeşilova & Okur, 2018; Zedan & Abu Nassar, 2015) the result is also in line with the resource dependence theory. When the number of the members in the board increase, the ability of the firm to reach to resources and information increases. This implies that large board size could be more efficient if it encompasses people of diverse background. Based on this, the study fails to reject the null hypothesis that there is no significant relationship between female directorship and financial performance of listed manufacturing company in Nigeria. The results on the control variables indicate that company size (FSIZE) which is represented by natural logarithm of total assets has significant positive association with financial performance (ROA). This implies that larger companies tend to perform better than small companies.

5.1 Conclusion and Recommendation

This study established the relationship between board of directors and financial performance, where the three board of the directors attribute were used as independent variables. The study finds board effectiveness through board independency and number of board member. They both have statistically positive impact on financial performance. The findings highlight the importance of board independence in enhancing the monitoring capacity of the board of director. While female directorship also have a positive but insignificant influence on the financial performance of listed manufacturing companies in Nigeria. This implies that presence of female on the board does not help in monitoring the managerial efficiency. All the independent variables are collectively significant in explaining changes in financial performance of listed manufacturing companies industries in Nigerian. Therefore, the study concludes that number of independent director on board and the board size improve manufacturing companies' financial performance significantly.

The study recommends the use of large proportion of independent non-executive directors in the composition of board of directors as recommended in the corporate governance codes in Nigeria to ensure proper monitoring and compliance with regulation. The study also recommends that the shareholders of listed manufacturing firms should ensure that the board has a reasonable large amount of members as it has been revealed that a larger board will increase the financial performance.

References

- Afrinvest. (2018). The Nigerian Manufacturing Sector Report : Unlocking Potentials for Growth. Retrieved from <https://www.proshareng.com/news/Manufacturing/The-Nigerian-Manufacturing-Sector-Report---U/42537>
- Ahmed, E., & Hamdan, A. (2015). The Impact of Corporate Governance on Firm Performance: Evidence From Bahrain Bourse. *International Management Review.*, 11(2), 21–37. <https://doi.org/10.22495/cocv13i3p11>
- Alabede, J. O. (2016). Effect of Board Diversity on Corporate Governance Structure and Financial performance: Evidence from the UK Listed Firms. *Asian Journal of Accounting and Governance*, 7, 67–80. <https://doi.org/10.17576/ajag-2016-07-06>
- Alzoubi, E. S. S. (2016). Disclosure quality and earnings management: Evidence from Jordan. *Accounting Research Journal*. <https://doi.org/10.1108/ARJ-04-2014-0041>
- Bennouri, M., Chtioui, T., Nagati, H., & Nekhili, M. (2018). Female board directorship and firm performance: What really matters? *Journal of Banking and Finance*, 88, 267–291. <https://doi.org/10.1016/j.jbankfin.2021.12.010>
- Boadi, E. K., & Li, Y. (2015). An Empirical Analysis of Leverage and Financial Performance of Listed Non-Financial Firms in Ghana. *International Journal of Economics and Finance*. <https://doi.org/10.5539/ijef.v7n9p120>
- Boateng, A., Bi, X. G., & Brahma, S. (2021). The impact of firm ownership, board monitoring on financial performance of Chinese mergers and acquisitions. *Review of Quantitative Finance and Accounting*, 49(4), 925–948. <https://doi.org/10.1007/s11156-016-0612-y>
- Brickley, J. A., Lease, R. C., & Smith, C. W. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20(C), 267–291. [https://doi.org/10.1016/0304-405X\(88\)90047-5](https://doi.org/10.1016/0304-405X(88)90047-5)
- Brigham, E. F., & Houston, J. F. (2021). *Fundamentals of financial management* (15th ed.). Cengage Learning.
- Byrd, J., & Hickman, K. (1992). The case for independent updates. *Journal of Applied Corporate Finance*, 5(3), 78–82. <https://doi.org/10.1109/mrd.1992.242626>
- Cavaco, S., Challe, E., Crifo, P., Rebérioux, A., & Roudaut, G. (2016). Board independence and financial performance: analysis on (French) company and individual data. *Applied Economics*, 48(52), 5093–5105. <https://doi.org/10.1080/00036846.2016.1170936>
- Chen, C. H., & Al-Najjar, B. (2012). The determinants of board size and independence: Evidence from China. *International Business Review*, 21(5), 831–846. <https://doi.org/10.1016/j.ibusrev.2011.09.008>
- Core, J. E., Rusticus, T., & Wayne, G. (2004). Does Weak Governance Cause Weak Stock Returns ? An Examination of Firm Financial performance and Analysts ' Expectations. *The Journal of Finance*, 61(2), 655–687. Retrieved from <http://www.jstor.org/stable/3699354>
- Dalton, D. R., Daily, C. M., Johnson, J. L., Ellstrand, A. E., Dalton, D. A. N. R., & Daily, C. M. (2015). Academy of Management NUMBER OF DIRECTORS AND FINANCIAL

PERFORMANCE :, 42(6), 674–686.

- Donaldson, L., & Davis, J. H. (1991). Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns. *Australian Journal of Management*, 16(1), 49–64. <https://doi.org/10.1177/031289629101600103>
- Fama, E. F., & Jensen, M. C. (1998). Agency Problems and Residual Claims. *Ssrn*. <https://doi.org/10.2139/ssrn.94032>
- Garba, T., & Abubakar, B. A. (2014). CORPORATE BOARD DIVERSITY AND FINANCIAL PERFORMANCE OF MANUFACTURING COMPANIES IN NIGERIA : AN APPLICATION OF PANEL DATA APPROACH Tukur Garba Bilkisu Aliyu Abubakar, 4(2), 257–277.
- Gray, S. J., Kang, H., & Cheng, M. (2007). Corporate Governance and Board Composition: Diversity and Independence of Australian Boards. *Corporate Governance: An International Review*, 15(2), 194–207. <https://doi.org/10.1111/j.1467-8683.2007.00554.x>
- Gujarati, D. N. (2004). *Basic Econometrics*. *Basic Econometrics* (Vol. 4.). <https://doi.org/10.1057/9780230226203.0425>
- Hillman, A. J., Cannella Jr., A. A., & Harris, I. C. (2002). Women and racial minorities in the boardroom: how do they differ? *Journal of Management*, 28(6), 747–763.
- Hussain, M. A., & Hadi, A. R. A. (2021). Corporate governance and firm performance: Evidence from CIBD Malaysia. *American Journal of Research Communication*, 5(12), 1–21.
- J.m.wooldridge. (2011). *Introductory Econometrics*. *Journal of contaminant hydrology* (Vol. 120–121). <https://doi.org/10.1016/j.jconhyd.2010.08.009>
- Jensen, M. C. (2001). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance*, 14(3), 8–21. <https://doi.org/10.1111/j.1745-6622.2001.tb00434.x>
- Jensen, C., & Meckling, H. (1976). <Jensen_76.Pdf>. *Journal of Financial Economics*, 3, 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance*. <https://doi.org/10.1016/j.jcorpfin.2014.12.004>
- Mandala, N., Kaijage, E., Aduda, J., & Iraya, C. (2018). Gender Diversity of Boards, Board Composition and Firm Performance. *European Scientific Journal, ESJ*, 13(34), 62. <https://doi.org/10.19044/esj.2021.v13n34p62>
- Nahar Abdullah, S. (2004). Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance: The International Journal of Business in Society*, 4(4), 47–61. <https://doi.org/10.1108/14720700410558871>
- Nairametrics. (2021, November 17). Power Ranking: These are the largest Manufacturing Companies in Nigeria (2021). Retrieved from <https://nairametrics.com/2021/11/17/power-ranking-these-are-the-largest-manufacturing-companies-in-nigeria-2021/>

- Nguyen, M. T. T., Evans, E., & Lu, M. (2021). Independent directors, ownership concentration and firm performance in listed companies: Evidence from Vietnam. *Pacific Accounting Review*, 29(2), 204–226. <https://doi.org/http://dx.doi.org/10.1108/MRR-09-2015-0216>
- Ogunbiyi, A. (n.d.). Manufacturing companies face hostile takeovers by foreign investors. *Vanguard*, p. 2018. Retrieved from <https://www.vanguardngr.com/2018/09/manufacturing-companies-face-hostile-takeovers-by-foreign-investors/>
- Okunlola, M. K. (2021). Manufacturing industry in dire need of transformation – Head Audit Services at KPMG, Mr Okunlola. *Vanguard*. Retrieved from <https://www.vanguardngr.com/2021/02/manufacturing-industry-dire-need-transformation-head-audit-services-kpmg-mr-okunlola/>
- Pfeffer, J., & Salancik, G. (1977). Organizational Context Tenure the Hospital. *Academy of Management Journal*, 20(1), 74–88.
- Renders, A., Gaeremynck, A., & Sercu, P. (2010). Corporate-governance ratings and company performance: A cross-European study. *Corporate Governance: An International Review*, 18(2), 87–106. <https://doi.org/10.1111/j.1467-8683.2010.00791.x>
- Ross, S. A., Westerfield, R., & Jordan, B. D. (2019). *Fundamentals of corporate finance* (12th ed.). McGraw-Hill Education.
- Sanusi, L. S. (2012). Banking reform and its impact on the Nigerian economy. *CBN Journal of Applied Statistics*, 2(2), 115–122.
- Ujunwa, A. (2012). Board characteristics and the financial performance of Nigerian quoted firms, 12(5), 656–674. <https://doi.org/10.1108/14720701211275587>
- Wooldridge, J. (2002). *Econometric Analysis of Cross Section and Panel Data*.
- Yeşilova, F. D. T., & Okur, M. R. (2018). CORPORATE GOVERNANCE AND PERFORMANCE: THE DIVERGENCE OF OPERATING AND SHARE PERFORMANCE, 154–177.
- Zedan, H. I., & Abu Nassar, M. (2015). The Effect of Corporate Governance on Financial performance of Jordanian Manufacturing Companies: Evidence from Amman Stock Exchange. *Dirasat Administrative Sciences*, 41(2), 465–481. <https://doi.org/10.12816/0007483>