

## Corporate Board Heterogeneity and Firm Performance of Listed Manufacturing Firms in Nigeria

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### ABSTRACT:

This study investigated the impact of corporate board heterogeneity on the financial performance of listed firms in Nigeria. The study analyzed panel data on various types of board heterogeneity, such as board gender heterogeneity (BOGD), board foreign director heterogeneity (FDRP), board CEO gender heterogeneity (CEOG), and board ownership heterogeneity (CEON). The firm's leverage variable was also included as a control. Data was gathered from 42 companies listed on the Nigerian Exchange Group whose financial accounts were made public for ten years, from 2012 to 2021. The study used EVAA (Economic Value-Added Analysis) to measure firm performance. The collected data underwent various screening and diagnostic tests to meet the basic assumptions required for inferential statistical analysis. The data was analyzed using statistical methods such as descriptive and moderate multiple regression. The results revealed that board gender heterogeneity (BOGD), CEO gender heterogeneity, and ownership heterogeneity had no significant impact on the financial performance (EVAA) of listed companies in Nigeria. However, FDRP (foreign director heterogeneity on the board) significantly influenced financial performance (EVAA). The investigation found that although the gender heterogeneity of the board of directors and ownership heterogeneity do not significantly impact the firm's performance, management of firms may need to consider hiring and retaining foreign nationalities on the corporate board in Nigeria. This is because foreign directors can provide more varied perspectives, ideas, and expertise, which, in turn, increases the capacity of the firm to make more informed and effective decisions.

**KEYWORDS:** Board heterogeneity, corporate governance, economic value added, financial performance, firm leverage

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## INTRODUCTION

Corporate boards are essential to an organization's success. They set the strategic direction of businesses, make sensible investment decisions, create rules and guidelines, oversee operations, and negotiate on behalf of stakeholders. Along with overseeing management, board directors help companies develop and grow shareholder value by offering informed counsel and guidance (Cao et al., 2021).

The effectiveness of boards as the primary internal governance mechanism depends on their level of heterogeneity, according to Olaoti (2016). Board heterogeneity has become an important aspect of corporate governance as it provides a robust internal control mechanism for the board of directors to make decisions that are both effective and efficient (Campbell & Minguez, 2010). Diverse perspectives among board members can improve the quality of decisions the board makes, substituting board heterogeneity for other forms of governance. According to Wahid (2012), board members should not merely use heterogeneity for superficial diversity but also benefit from it. According to Daniel et al.

(2020), board heterogeneity is centered on the relationship between directors and the organizational strategies they choose to follow. Directors' backgrounds and characteristics often influence these strategies.

Various measurements are employed to evaluate organizational performance. Two main categories are financial, which comprises market value, growth, and profitability. Innovation, quality, customer happiness, employee contentment, and reputation are examples of non-financial competitive features that fall under the second category, operational factors (Venkatraman & Ramanujam, 1986). Accurately measuring firm performance is the most significant challenge in corporate finance. This study focuses on market ratio, specifically enterprise value-added, which Forza & Salvador (2000) noted has rarely been used in related studies. Marshall introduced the term "residual income" in 1890 to describe the enterprise value-added performance indicator. This was defined as the net operating income after taxes, less the capital charge.

Board heterogeneity is possible in different ways, such as gender, age, experience, tenure, and nationality (Al-ahdal & Hashim, 2022). However, despite gender diversity, previous Nigerian scholars focus less on how other forms of board heterogeneity affect firm performance (Anderson et al., 2011). Besides the view of Khan & Abdul Subhan (2019), existing studies relating to corporate governance firm performance nexus are heavily rooted in one aspect (agency problems) of firms about theoretical perspective or return on total asset about firm performance perspective. The notion is that other aspects, such as board human capital, which works as the backbone of corporate governance, have been given less attention, and the need to implore diverse human capital towards achieving reduced firm uncertainties for higher performance is still an open question.

Over the years, researchers have focused on studying the impact of a diverse board on company decision-making processes and success. This has led to concerns among company owners about how a board's composition influences a company's performance. Many scholars have sought to determine the factors that impact the board's capacity to make well-informed strategic decisions, including the composition of the board.

This aspect has gained heightened importance in the current volatile business environment. While research has been conducted in developed countries, there is limited knowledge regarding the influence of board diversity on the performance of underdeveloped countries such as Nigeria. Evidence shows that the current corporate governance is insufficient and the major contributor to financial failures in Nigeria (Ofo, 2011). The nexus between corporate governance and performance has continued to pique the interest of policymakers.

Although several studies have been conducted on board heterogeneity and firm performance, they have yielded contextual, conceptual, and methodological research gaps. The contextual research gaps arise because of the difference in the contexts under which the studies are conducted. Empirical literature reveals that most studies on corporate board heterogeneity and the performance of firms were conducted for listed companies in Nigeria. However, this study seeks to concentrate on manufacturing firms in Nigeria. Furthermore, a review of the literature presented the conceptual research gaps. This research gap arises when the studies do not have exactly similar variables. This current study examined four indicators of board heterogeneity: Board gender heterogeneity (BOGD), board foreign director heterogeneity (FDRP), board CEO gender heterogeneity (CEOG), and board ownership heterogeneity (CEON). This study stands out in its use of Economic Value Added as a measure of firm performance, whereas other studies typically use EPS, ROA, or ROE. The study covered these major gaps. These actions guaranteed more reliable results for policy actions than currently exists in previous studies. Hence, this study investigates the impact of board heterogeneity on the performance of listed firms in Nigeria. The study particularly examined the potential impact of gender heterogeneity within the board of directors on the enterprise value added of non-financial firms. It verified the impact of gender heterogeneity of the board CEO on the enterprise value added of non-financial firms. Furthermore, the study analyzed the influence of board foreign director heterogeneity on the enterprise value added of non-financial firms and how ownership heterogeneity of the board of directors affects the enterprise value added of non-financial firms listed in Nigeria.

### **Board Heterogeneity, firm performance, and enterprise value added.**

Diversity, which refers to heterogeneity, includes significant differences between individuals that should be considered in specific situations and contexts, according to The Australian Multicultural Foundation (2010). In a defined work or market environment, heterogeneity can be described as the variation of social and cultural identities among people (Taylor, 2001). Moreover, focuses on personal factors that influence people's major life experiences, such as gender, ethnicity, race, national origin, religion, age cohort, and work specialization, which are strategic to one's personality traits (Schwizer et al., 2012).

Board heterogeneity also involves occupational and social heterogeneity (Van der Walt & Ingley, 2003). This explains the difference in industry experience, organizational membership, professional background, tenure, education, and other factors due to social heterogeneity such as gender, age, race, etc. Evidence shows that occupational heterogeneity is critical in promoting debate during decision-making, while social heterogeneity helps eliminate stereotypes, distrust, and emotional conflict as it is linked with social processes (Li et al., 2014). Akram et al. (2022) studied board heterogeneity and corporate performance. Their study revealed that occupational heterogeneity significantly and positively contributes to firm value except for finance education and other education. However, social heterogeneity and gender diversity have a negative effect on firm performance.

Although some studies highlight the nexus between board heterogeneity and firm performance, the nature of the relationship is still a subject of debate. This arises due to difficulty in categorizing firms' performance. Various measurements are employed to evaluate organizational performance, and the two main categories in literature are – financial, which is represented by profitability, growth, and market value, and operational category, which includes non-financial competitive aspects such as customer satisfaction, quality, innovation, employee satisfaction, and reputation (Venkatraman & Ramanujam, 1986). This study has adopted financial categories, particularly financial ratios, in line with Santos et al. (2007). Therefore, in their study, financial ratios are classified into liquidity, activity (operational), profitability, debt, and market ratios. This study focuses on market ratio, specifically enterprise value-added, noting that this measure has rarely been used in related studies in Nigeria.

The nature of the relationship existing between board diversity and performance shows that age and gender heterogeneity has a significant negative correlation with short-term performance but not with long-term performance; however, occupational background impacts positively on performance (Wang, 2023; Ndubuisi et al., 2021). This contrasts with the findings of Phan and Duong (2021). The role of knowledge capability of CEOs, gender diversity, and board size on firms' performance has been established (Daniel *et al.*, 2020). In Nigeria, there are diverse opinions on this. For instance, Ali & Abubakar (2020) found that ethnic diversity and board size positively and significantly impacted firm performance measured by Tobin's Q. However, when using ROA as the dependent variable, ethnic diversity had a negative and insignificant impact, while firm size had a negative and significant impact. Onyali and Okereke (2018) study revealed that board size, gender diversity, and board independence significantly positively impact the return on assets of manufacturing companies listed on the Nigerian Exchange Group. These differences interest policymakers, and several factors could be responsible for them. This current study examines this issue more deeply to understand the context that validates the importance of diversity and its growing appeal among policymakers. Accurately measuring firm performance is the most significant challenge in corporate finance. In 1890, Marshall referred to the enterprise value-added performance measure as the 'residual income,' which he defined as after-tax net operating income minus capital charge. According to Adams & Mehran (2005), companies must earn more than the cost of capital to create value for shareholders. In the 90s, Stern Stewart popularized the concept of Enterprise Value Added and suggested that it is almost 50% better than accounting performance measures in explaining the variability in shareholder wealth. Enterprise value added is widely used as a performance indicator for financial analysis. It measures the results obtained by the company against the actions on the investment made (Nur a'ini, 2013), focusing on value creation from management to shareholders (Martini & Yudi, 2009). Positive enterprise value added indicates that the company's management can create value for investors by delivering returns that exceed the cost of capital (Fauzan, 2006).

### **Theoretical framework - Upper Echelon Theory**

Hambrick and Mason (1984) developed a theory to explain why organizations act the way they do. According to the theory, the most powerful actors in an organization are the top executives. This is known as the upper echelon theory, which states that the top managers drive the coalition of an organization, and their values and beliefs are reflected in the organizational outcome, including its effectiveness and strategy. In other words, the organization is a reflection of its top executives. Moreover, Hambrick (2007) argues that executive managers act according to their interpretations of situations created by their values, experiences, and personalities. This interpretation is crucial for improving firm performance. This research will focus on the upper echelon theory, examining how top management, including the CEO and board of directors, are classified in terms of CEO gender heterogeneity, board gender heterogeneity, foreign director heterogeneity, and director ownership heterogeneity. The performance variable being considered is economic value added.

## METHODOLOGY

The research design utilized for this study is the *ex-post facto* design, which is appropriate for studies that rely on secondary data sources that the researcher. The population of this study includes all 59 manufacturing firms listed in Nigeria. The study employed a sampling filtering technique, which involved selecting firms based on specific criteria. These criteria included being listed on the Nigerian Exchange Group market between 2012 and 2021, having annual financial reports available within that period, and being in the manufacturing industry while being listed on the Nigerian Exchange Group before 2012. We excluded firms that joined the Nigerian Exchange Group after 2012 to ensure that the study had balanced panel data and a homogeneous period scope.

**Table 1:** Sample Size Representation

| S/N          | Sector            | Population Size | Newly listed firms after 2012 | Suspended Firms (Inactive) | Sample Size |
|--------------|-------------------|-----------------|-------------------------------|----------------------------|-------------|
| 1            | Agriculture       | 5               | 1                             | 0                          | 4           |
| 2            | Conglomerate      | 5               | 0                             | 0                          | 5           |
| 3            | Consumer Goods    | 20              | 2                             | 2                          | 16          |
| 4            | Healthcare        | 9               | 2                             | 1                          | 6           |
| 5            | Industrial Goods  | 15              | 5                             | 3                          | 7           |
| 6            | Natural Resources | 4               | 0                             | 0                          | 4           |
| <b>Total</b> |                   | <b>58</b>       |                               |                            | <b>42</b>   |

**Source:** Researcher's Compilation culled from Nigerian Exchange Group (NGX) website, 2022.

The study included a total of 42 manufacturing firms that were listed in Nigeria

Analytically, descriptive statistics such as mean, maximum, and standard deviations and inferential statistics such as correlation and ordinary least square regression techniques were adopted to analyze the data.

### Model specification

The model presented below is adapted from Chen and Dodd's (2001) research. It aims to investigate how board heterogeneity affects the performance of manufacturing firms listed in Nigeria. The functional equation of this model can be expressed as follows:

**Enterprise Value Added** = f(Board of directors' gender heterogeneity, Board CEO gender heterogeneity, Board Foreign Director heterogeneity, and Board of Directors Ownership heterogeneity and control.....(1)

This can be re-written explicitly as:

$$\text{EVAA} = \pi_0 + \pi_1 \text{BOGD} + \pi_2 \text{CEOG} + \pi_3 \text{FDRP} + \pi_4 \text{CEON} + \pi_5 \text{DETA} \dots \dots (2)$$

Econometrically we estimate the above expression as:

$$\text{EVAA} = \pi_0 + \pi_1 \text{BOGD} + \pi_2 \text{CEOG} + \pi_3 \text{FDRP} + \pi_4 \text{CEON} + \pi_5 \text{DETA} + \sum_t (3)$$

Where:

EVAA = Enterprise Value-Added Analysis

BOGD = Board of Directors' Gender

Heterogeneity CEOG = Board CEO Gender

Heterogeneity

FDRP = Board Foreign Director

Heterogeneity CEON= Board of Directors'

Ownership Heterogeneity DETA = Firm

Leverage

### Operationalization of Variables

The study examines the relationship between firm performance, measured as Enterprise Value Added, and four proxies of board heterogeneity, including Board gender heterogeneity (BOGD), board foreign

director heterogeneity (FDRP), board CEO gender heterogeneity (CEOG), and board ownership heterogeneity (CEON). The study also includes the variable of firm leverage as a control.

**Table 2:** Variables Definitions and Measurements

|   | Variable Name                              | Definition/Measurements                                                                                                                                                                                                                     |
|---|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Enterprise Value Added                     | The calculation for Enterprise Value Added is derived by adding the market capitalization and total liabilities and subtracting the cash balance.                                                                                           |
| 2 | Board of Directors' Gender Heterogeneity   | The metric for determining the gender heterogeneity of the board of directors is computed as a percentage, considering the total number of executive and non-executive female directors on the board while excluding the company secretary. |
| 3 | Board CEO Gender Heterogeneity             | The gender heterogeneity of the Board CEO is measured using a Dummy method. Companies with female CEOs are assigned a value of "1," while those without are assigned a value of "0".                                                        |
| 4 | Board Foreign Director Heterogeneity       | Using the Dummy method, Board Foreign Director heterogeneity is "1" for companies with foreign nationals on their board and "0" otherwise.                                                                                                  |
| 5 | Board of Directors Ownership Heterogeneity | The measure of board ownership heterogeneity in percentage is calculated by dividing the total shares held by directors by the total outstanding shares.                                                                                    |
| 6 | Firm Leverage                              | The percentage of Firm Leverage is calculated by dividing the total liabilities by the total equity.                                                                                                                                        |

**Source:** Authors' Compilation, 2023

## RESULTS AND DISCUSSION

### Descriptive statistics analysis

The table shows that each variable is analyzed in terms of its mean, standard deviation, maximum, and minimum.

**Table 3:** Descriptive Statistics

| VARIABLES | MEAN  | STAN. DEV. | MIN.  | MAX.   | NO OBS |
|-----------|-------|------------|-------|--------|--------|
| EVA       | 0.01  | 0.22       | -2.89 | 1.09   | 420    |
| BODG      | 13.17 | 12.54      | 0     | 66.67  | 420    |
| FDRP      | 0.50  | 0.50       | 0     | 1      | 420    |
| CEOG      | 0.05  | 0.22       | 0     | 1      | 418    |
| CEON      | 0.39  | 0.49       | 0     | 1      | 418    |
| DETA      | 58.49 | 22.54      | 12.42 | 222.97 | 420    |

**Source:** Author (2023)

Table 3 presents the descriptive statistics of the study. The dependent variable of firm performance has a mean value of 0.01 and a standard deviation of 0.22. This indicates that the average minimum and maximum values of economic value added recorded during the study period are -2.89 and 1.09, respectively. The statistics for the independent variables show that the average board gender heterogeneity (BOGD) is 13.17, with a standard deviation of 12.54. This means that, on average, about 13% of the board members of the studied firms were female directors. The average board foreign director heterogeneity (FDRP) is 0.50 with a standard deviation of 0.50, which implies that about 50% of the board members of the studied firms are foreign directors. However, the mean value of CEO gender heterogeneity on the board is 0.05, and its standard deviation is 0.22. This indicates that, during the review period, approximately 5% of the firms' CEOs were female on average. The table indicates that

the average value of heterogeneity in board CEO nationality (CEON) is 0.39, with a standard deviation of 0.49. This implies that roughly 39% of the firms' CEOs examined are not from the country of origin.

#### Correlation Analysis

The statistical method of the Spearman rank correlation test is not dependent on the data distribution assumption. It is the most appropriate way to analyze the correlation between variables measured on an ordinal scale or higher. The data does not conform to a normal distribution for this research, so the Spearman rank correlation test is applied. The results of the test are presented in Table 4.

**Table 4: Correlation analysis**

| VARIABLES   | EVAA    | BOGD    | FDRP    | CEOG    | CEON    | DETA   |
|-------------|---------|---------|---------|---------|---------|--------|
| <b>EVAA</b> | 1.0000  |         |         |         |         |        |
| <b>BOGD</b> | 0.1906  | 1.0000  |         |         |         |        |
| <b>FDRP</b> | 0.0372  | -0.0712 | 1.0000  |         |         |        |
| <b>CEOG</b> | 0.0817  | 0.2551  | -0.1515 | 1.0000  |         |        |
| <b>CEON</b> | 0.1439  | -0.0589 | 0.5101  | -0.1868 | 1.0000  |        |
| <b>DETA</b> | -0.3668 | 0.0215  | -0.0160 | 0.0593  | -0.1803 | 1.0000 |

**Source:** Author's computation (2023)

The study results are presented in Table 4, which demonstrates the correlation between independent and dependent variables. The findings show a positive correlation between board gender heterogeneity (0.1906) and economic value added during the study period. Similarly, board foreign director heterogeneity (0.0372) is positively associated with economic value added. During the study period, it was found that there is a positive relationship between board CEO gender heterogeneity (0.0817) and firm performance. Furthermore, the diversity of board CEO nationalities (0.1439) positively correlates with economic value added throughout the period under study. On the other hand, the leverage control variable (-0.3668) shows a negative correlation with firm performance during the same period.

The results of the regression analysis for this study are presented in Table 5. The analysis shows that the independent and control variables explain approximately 13% of the changes in the dependent variable (economic value added) during the period under study, as indicated by an R-squared value of 0.1298. The regression analysis model for the sample firms has an F-statistic value of 12.23, with a p-value of 0.0000. This indicates that the model has a good fit and is statistically significant at a 1% level, making it suitable for statistical inferences.

#### Panel fixed and random effect regression analysis.

The regression model with fixed effects has an F-statistics score of 8.63, which implies that the model is appropriate for statistical inference. The R-squared value is 0.1047, which indicates that the variables analyzed can explain approximately 10% of the systematic variations in firm performance. The Wald statistics value of 53.04 and a probability value of 0.0000 presented by the panel random effect regression model indicate that it is appropriate for statistical inference. The model's R-squared value is 0.0786, indicating that the variables analyzed account for roughly 8% of the deliberate variations in firm performance.

#### Hausman Specification Test

The Hausman test is used to decide the suitable model for panel regression analysis. The p-value of 0.0014 at a 5% significance level indicates that the fixed effect model is preferred over the random effect model. It helps evaluate the suitability of fixed and random effect models for panel regression analysis.

### Least square variable regression (LSDV)

The study employs the LSDV model to provide interpretation and policy recommendations. The results show that the independent and control variables of the study can explain about 28% of the systematic changes in economic value added during the studied period, with an R-squared value of 0.2758. The F-statistics (3.05) of the LSDV regression model for the sample firms, associated with a p-value of 0.0000, indicate that the LSDV regression model is statistically fit at a 1% significance level. This means that the LSDV regression model can be used for statistical inferences.

**Table 5:** Regression Result

|                      | EVAA<br>Model<br>(Pool OLS) | EVAA Model<br>(Fixed Effect) | EVAA Model<br>(Random<br>Effect) | EVAA Model<br>(LSDV<br>Regression) |
|----------------------|-----------------------------|------------------------------|----------------------------------|------------------------------------|
| <b>CONS.</b>         | 0.166<br>{0.000} ***        | 0.156<br>{0.005} **          | 0.176<br>{0.000} ***             | 0.233<br>{0.019} **                |
| <b>BOGD</b>          | 0.001<br>{0.170}            | -0.002<br>{0.112}            | 0.001<br>{0.423}                 | -0.002<br>{0.112}                  |
| <b>FDRP</b>          | -0.001<br>{0.976}           | 0.163<br>{0.038} **          | 0.005<br>{0.838}                 | 0.163<br>{0.038} **                |
| <b>CEOG</b>          | 0.103<br>{0.030} **         | 0.025<br>{0.649}             | 0.088<br>{0.071}                 | 0.025<br>{0.649}                   |
| <b>CEON</b>          | 0.016<br>{0.516}            | -0.004<br>{0.913}            | 0.009<br>{0.732}                 | -0.004<br>{0.913}                  |
| <b>DETA</b>          | -0.003<br>{0.000} ***       | -0.004<br>{0.000} ***        | -0.003<br>{0.000} ***            | -0.004<br>{0.000} ***              |
| <b>F-Stat/W-Stat</b> | 12.23 {0.0000}              | 8.63 (0.0000)                | 53.04 (0.0000)                   | 3.05(0.0000)                       |
| <b>R- Squared</b>    | 0.1298                      | 0.1047                       | 0.0786                           | 0.2758                             |
| <b>VIF Test</b>      | 1.21                        |                              |                                  |                                    |
| <b>Hetero. Test</b>  | 43.77 {0.0000}              |                              |                                  |                                    |
| <b>FE/RE</b>         |                             | YES<br>(0.0024)              | {1.81 YES {2.71 (0.0500)}        |                                    |
| <b>Hausman</b>       |                             | 19.66 {0.0014}               |                                  |                                    |

**Note:** Bracket {} denote p-values; \*\*, \*\*\* signify statistical significance at 5% and 1%, respectively.

### Test of hypotheses

Hypothesis 1: The gender heterogeneity of the board of directors has no significant impact on the enterprise value added of non-financial firms listed in Nigeria

The LSDV regression model's results suggest that the gender diversity of the board of directors [coefficient = -0.002 (0.112)] does not significantly affect the performance of listed manufacturing firms in Nigeria. This is because the variable under consideration has a statistically insignificant negative coefficient. Consequently, the null hypothesis is accepted. It posits that the gender diversity of the board of directors does not significantly impact the enterprise value added for non-financial firms listed in Nigeria. The results align with the study by Phan and Duong (2021), suggesting that the impact of female

directors on firm performance is insignificant.

Hypothesis 2: The gender heterogeneity of the Board CEO has no significant impact on enterprise value added of non-financial firms listed in Nigeria

The LSDV regression model's results indicated that CEO gender diversity has a positive yet not statistically significant impact on the performance of listed manufacturing firms in Nigeria for the examined period. This implies that the null hypothesis, which posits that the gender heterogeneity of the board CEO has no significant impact on enterprise value added of non-financial firms listed in Nigeria, is upheld. These findings contradict prior studies by Eagly & Carli (2003), who argued that women's enhanced supportive leadership approach might be more effective than men's competitive techniques. Sunden & Surette (1998) also note that women are more conventional and cautious than men; they tend to avoid financial losses and are reluctant to take excessive risks, which may lead to poor performance.

Hypothesis 3: Board foreign director heterogeneity does not significantly affect the enterprise value-added of non-financial firms listed in Nigeria

The LSDV regression model results reveal that the inclusion of foreign directors on the boards of listed Nigerian manufacturing firms significantly impacts their performance over the study period. The research rejects the null hypothesis that board foreign director heterogeneity has no meaningful effect on the enterprise value added of Nigerian-listed non-financial enterprises. The study indicates that a rise in the number of foreign directors correlates with a marked enhancement in the performance of listed manufacturing companies in Nigeria over the period of this research. This outcome aligns with the views presented by Dalton and Dalton in 2005.

Hypothesis 4: The ownership heterogeneity of the Board of Directors does not significantly impact the enterprise value added of non-finance firms listed in Nigeria.

The LSDV regression model results indicate that the heterogeneity of the board of directors' ownership [coefficient = -0.004 (p-value = 0.913)] does not significantly affect the performance of listed manufacturing companies in Nigeria for the study period. Consequently, the null hypothesis positing that the board of directors' ownership heterogeneity does not significantly influence the enterprise value added of listed non-financial firms in Nigeria is accepted.

## CONCLUSION

Board heterogeneity is a crucial tool for controlling and managing a firm. To investigate the influence of board heterogeneity on the performance of firms in Nigeria, this study examines samples obtained from the manufacturing firms listed. The findings of the study are mixed. The study concludes that gender heterogeneity of the board of directors, CEO gender heterogeneity, and ownership heterogeneity do not significantly affect the performance of the firm. However, the study discovered foreign director heterogeneity to significantly improve the performance of Nigerian-listed manufacturing firms during the study period. Based on the findings from the analysis,

1. It is suggested that firms consider increasing women representation on their boards. This is because evidence shows that women make firm decisions, and this can impact positively on performance of firms. In addition, women tend to be more traditional and careful than men, avoiding financial losses and being hesitant to take on excessive risks, which impacts performance positively.
2. Firms should consider increasing opportunities for women in leadership positions. This is because female CEOs have been found to possess higher emotional intelligence, which can boost the morale of both management and staff, leading to increased productivity and better overall company performance.
3. Another important consideration for firms' management in Nigeria is to develop policies that encourage the hiring and retaining foreign nationals on corporate boards. This is because diverse perspectives, ideas, information, expertise, and foreign aid can enhance the capacity of the firm to make more informed and effective decisions.
4. It is also recommended that the ownership of shares by board directors should be minimized. This is because when board directors pursue their wealth at the expense of the company's goals, it can negatively affect the company's performance.

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