FEMALES ON CORPORATE BOARDS AND FIRM FINANCIAL PERFORMANCE: NEW EVIDENCE FROM NIGERIA

Onyinyechukwu Aghadike and Oluseun Paseda
Department of Banking and Finance,
University of Ibadan.
seunpash@yahoo.com

Abstract
The board is the most influential decision-making organ of any modern firm with wide-ranging and high-impact responsibilities from strategy setting, governance, and to the appointment of members to the firm's top leadership. The size or complexity of many modern firms places a demand on high-level expertise and diversity on corporate boards. A critical dimension of board diversity is gender. The aim of this study is to investigate the influence of 'females on board' on the financial performance of listed firms in Nigeria. The research intends to show or investigate the impact of female presence on corporate boards on financial performance. The research utilizes the panel study designs while the longitudinal survey study method was used for the collection of data. The research depends on secondary sources of data to collate figures for the variables and embrace the purposive sampling procedure. The ideal population for the research comprises all manufacturing firms registered with the Nigeria Stock Exchange (NSE). The specimen size for the research was 20 manufacturing firms. The data were collated from secondary sources of the annual report and accounts, fact books, and publications of the Nigerian Stock Exchange (NSE). The Hausman test was carried out to ascertain whether to apply Fixed Effects or Random Effects regression. It tested the null proposition to certify that the coefficients predicted by the random effects approximator are one and the same as the coefficients predicted by the unswerving fixed effects approximator. The empirical results suggest that the presence of female directors, as well as their proportion, exerts a favorable impact on financial performance measured by return on assets (ROA). The control factors, business size and company age exert a positive and negative effect on financial performance, respectively. The research proposes that managerial and legislative measures be taken to achieve a healthy gender balance on corporate boards in Nigeria.

Keywords: Females on Boards; Gender balance; Corporate governance; Financial performance; Capital markets

Introduction

The board is the most influential decision-making organ of any modern firm with wide-ranging and high-impact responsibilities from strategy setting, governance and to appointment of members to the firm's top leadership. The size or complexity of many modern firms places a demand on high-level expertise and diversity on corporate boards. The relationship between governance of corporate entities and business performance has recently grown into one of the most discussed topics amongst scholars and practitioners alike. Ozili (2021) provides a comprehensive review for the Nigerian corporate environment. The board of administrators is the "soul" of governance of corporate entities, and it is frequently where a company's success is decided (Guerra et al., 2009; Clarke, 2007; Zeghal, Adjaoud, & Andaleeb, 2007; Gillan, 2006; Yawson, 2006; Donaldson & Fafaliou, 2003; Fama & Jensen, 1983; Finkelstein & Hambrick, 1996). Proponents of board diversity argue that having a diverse board enhances making decision and monetary success (Peckel & Rhode, 2010). Milliken & Martins (1996) define apparent elements of board diversity as gender, ethnic background, race, and age.

There are no specific legal requirements for gender diversity in the Nigerian environment except for regulatory guidelines issued by the Central Bank of Nigeria (CBN) in pursuit of sustainability of banking principles and enshrinement of good corporate governance practices in the Nigerian Banking landscape. The Securities and Exchange Commission (SEC) Code of Governance and the 2018 Nigerian Code of Corporate Governance (NCCG) are also relevant corporate governance frameworks for Nigerian listed firms. The CBN regulations mandate a minimum of 30 percent female representation on boards of Nigerian commercial banks, the SEC Code recommends that publicly listed companies consider gender when selecting board members, and the NCCG encourages the board to set diversity goals and to be mindful of them when filling board vacancies. However, the SEC and NCCG Codes do not prescribe gender quotas. The absence of specific gender quotas could imply ambiguity in terms of what may be construed as compliant gender balance for non-bank listed firms.

As a result, this study's main theme is on gender diversity of Nigerian listed firms. Gender heterogeneity has grown into a widely discussed governance concern in recent years, attracting the attention of policymakers, stockholders, and academia (Johansen, 2008). The financial ramifications of gender diversity are more important to academics and decision-makers. Gender heterogeneity in boardrooms has been linked to good governance of corporate entities and positive business achievements, prompting a research. Agency theory has also been a related and prominent focus of allied corporate governance studies. The agency theory is based on the reality that many corporate executives are administrative representations of the company's owners rather than natural owners. Diversity is linked to managerial control in the sense that a highly controlled board is less likely to be diverse. Managerial control, on the other hand, is defined as the power of management to affect the result of board decisions. As a result, a varied board, subject to management control and vice versa, is conceivable. This is anticipated to have a positive influence since the number of top female executives may influence the advancement of women in lower-

level positions, provide mentorship and networking opportunities for junior-level female employees, and possibly contribute to higher female retention.

Problem Statement

Because managers are not firm owners, they have a tendency to be less concerned about the maximization of shareholders' wealth. They occasionally have a vested interest that leads them to make, from shareholders' perspective, irrational decisions or untrustworthy commitments (Jensen and Meckling, 1976). Most studies focus on how to effectively oversee or control organizational leaders against anti-corporate behaviour in order to effectively protect owners' interests. One basic pursuit of good corporate citizenry is gender diversity, that is, having more women on the board to enhance quality board deliberations in decision-making.

The fundamental goal of this research is to add to the growing literature on corporate governance and gender diversity, with a focus on a developing economy that has different legal, economic, and cultural settings than developed economies, where the majority of previous research has been conducted. Unfortunately, this aspect of business research in Nigeria has received little empirical attention. Paseda (2006), for instance, investigated investment performance of common stocks along several lines such as capital structure, dividend policy, asset pricing characteristics and inflation hedging capacity amongst others but did not consider any corporate governance variable in his analysis. This study, on the other hand, focuses on female board presence in order to justify its impact on the monetary achievement of enterprises listed on the Nigerian Stock Exchange (as assessed by Return on Assets). The goal of this research is to provide up-to-date empirical assessments using data from the year 2011 to 2020.

According to Lincoln and Adedoyin, quoted from IFC (2019), "the practical [Nigerian] situation is [characterized by] sexual stereotyping of social roles, discriminatory traditions and cultural prejudices. . . ." This circumstance could also be attributed to the cultural notion that places "men as the leaders of the society" and is one of the crucial factors limiting female participation in top leadership positions.

Yet the value that females bring to a board (over and beyond financial performance) is not in question. There is a plethora of literature, with conflicting results, on the relationship between gender diversity on the board and financial performance. Even where the findings do not establish a clear correlation between female participation on boards and corporate performance, it has been argued that there are other indicators for assessing value, such as ethical conduct, risk management, eye for detail, trustworthiness, and empathy. According to some authors, women are more trustworthy and collaborative than men, and this can improve board dynamics (IFC, 2019). Unsurprisingly, little is known in this area, thus we want to examine if there is a link between the gender composition of a board and the firm's success. In some nations, a gender quota system is being implemented in the workplace. According to Hoel (2008), Norway is the globally recognized case in point of business board gender ratios, with a 40% sexual role distribution for public limited firms as well as firms owned by state implemented in December of 2003. According to Marinova, Platenga, & Remery (2010) and De Anca (2008), France, Iceland, and the Netherlands are among

the nations that have implemented such enacted gender legislation. Gender ratios are also being debated in Canada, Belgium, Italy, and Japan, where guidelines are still being worked up at various levels of the approval procedure (Sealy, Vinnicombe, & Singh, 2008).

This progress appears unusual in underdeveloped markets. No such legislation exists or is being considered in Nigeria. Vision 2020 (National Technical Working Committee on Corporate Governance and Corporate Social Responsibility), that was thrown away prior to enactment, only pleaded a higher level of involvement in Corporate Governance activities but did not specify what that meant. In contrast, given the impact of globalization on the world, gender balance on corporate boards has been a topic of considerable debate and discussion in the near future. The empirical evidence on the impact of female board members on corporate performance has been mixed. It is therefore necessary to determine, in concise and experiential terms, whether panel gender mix is a normal occurrence with no negative consequences or has an effect on the company's monetary performance.

Also, this paper aims to check if there has been improvement in gender diversity of listed firms since some previous empirical studies.

The study's objectives are to investigate if:

1. Having a female director on a board has a bearing on financial performance.
2. The number of female board members has a bearing on financial performance.

Variables to Consider:

The purpose of this article is to investigate the effects of gender distribution on corporate financial performance.

Return on Asset (ROA): The quantity of remunerations (before interest and tax) a business may realise for every naira of properties under its control is known as return on asset (ROA), and it is a decent gauge of the company's viability. ROA clearly takes into record the properties that back commercial undertakings, as Brown, Davison, & Hagel (2010) discovered. Return on these properties, instead of simply presenting a healthy return on sales, reveals if the business can produce a sufficient profit before interest and taxes. Asset-heavy firms require a higher level of after-tax and interest revenue to stay afloat, whereas asset-light businesses can generate a strong return on investment even with a narrow margin. Using ROA as a chief viability measure, manager's responsiveness to the properties needed to keep the firm running is rapidly channeled.

Females on Board: The ratio of the number of females on the board to the overall board size is used to determine board gender. The board of directors has a natural propensity to be dominated by men, hence, the presence of women leads to gender diversity. In contrast to what is available in the opposite gender, there is a school of thought that the lack of a "clique or gang" among corporate women on boards makes them more independent in decision-making.

Theoretical Foundations:

The agency concept and the stakeholder principle are the underpinning theories for this study.

The agency principle explains the conflicting association between management (agents) and shareholders (principal) in the face of asymmetric information, unethical steward behaviour, and conflicts of interests between chief and steward, which awakens the two agency problems (moral hazard and adverse selection).

Theory of Agency (Jensen & Meckling, 1976)

Agency theory, which posits information asymmetry, unprincipled agent behaviour, and conflicts of interest among the prime (owner) and proxy (shareholder), defines the discordant relationship between managerial officers and shareholders (manager).

Agency costs and information asymmetry are two disadvantages of the principal-agent correlation. The agency theory is based on the idea that the prime and the proxy have different concerns, and that the prime will close the gap between them by giving incentives to the agent and covering the cost of keeping an eye on them (Jensen & Meckling, 1976). It also emphasizes that internal governance systems must be effective in order for agents to be held answerable for their actions (Li et al., 2008). In this spirit, the collected works on agency infers that efficient governance of corporate entities improves a company's legality as well as its financial performance (Michelon & Parbonetti, 2012; Jo & Harjoto, 2011). According to the agency theory, proper control mechanisms should be utilized to protect owners from personal concerns of managers, while keeping in mind the shareholders' desire for long-term company success (Oyejide & Soyibo, 2001; Ebrahim, Faudziah, & Abdullah, 2014).

Using agency theory, the function of directors in contributing to the success of the enterprises they manage will be studied. This requires examining the board's structure and leadership to understand how they influence outcomes.

Theory of Resource Dependence

The resource dependency principle underlines the tactical importance of other investors, in addition to present owners, in assuring enterprises' resource access through forming alliances with other stakeholders (Bello, 2012). The resource dependency principle is used to investigate the relationship among organizations alongside the critical means required to achieve maximum efficiency. This entails a review of the board's size and operation. As stated by resource dependency principle, one of the functions of the panel of administrators is usage of their societal contacts to cultivate as well as improve the company's outside credibility then to build good relations with other investors (Naseem et al 2017). Dalziel & Hillman (2003), Johl & Jackling (2009), and Lu Zhang (2012) argue that panels of administrators serve dual essential purposes: overseeing managers in the interest of shareholders (agency principle) and making services available (resource dependency principle). As stated by the resource dependence principle, the firm will benefit from multiple director hires. As also stated by the resource dependency theory, an independent panel allows board members to gain a greater understanding of dynamic

environments and have various sources of expertise and experience to enhance the firm's efficiency (Ebrahim, Faudziah, and Abdullah, 2014).

The efficacy of the panel of administrators as a shareholder surveilling device, on the other hand, can only be maximized if it is constrained by the right scale, composition, and leadership structure. As a result, the majority of code of best practices and corporate governance standards aim to analyze these panel underlying forces as the key to accomplishing highly desired panel efficacy (Bello 2012).

Furthermore, without a single-valued goal feature to provide consistency of purpose, organizations that embrace stakeholder theory would face managerial uncertainty, clash, ineptitude, and possibly even rivalrous laxity (Adewuyi & Olowookere, 2008).

Country Review

Norway

In 2003, the Norwegian government introduced legislation on mandatory gender quotas for female representation on boards. The Norwegian Public Limited Liability Companies Act requires at least 40 percent representation of each gender on boards. Since then, Norwegian corporate boards have complied with this directive and have at least 40 percent female representation. This phenomenon has been the subject of a series of debates in various regions on the need for a legally mandated quota to increase the number of women in supervisory roles, on boards, and in leading positions in general.

Kenya

Similar to the Norwegian model, the Kenyan Constitution requires all businesses to have not more than two-thirds of their board members of one gender. In addition, the Capital Markets Act of 2015, which outlines the Code of Corporate Governance Practices for Listed Companies in Kenya, requires companies to consider gender when appointing board members. Although these provisions are contained in the laws of Kenya, there are no penalties for failure to comply with the relevant laws. Therefore, companies that implemented gender diversity on their boards adopted a voluntary approach.

Kenya encourages gender equality, with firms listed on the Nairobi Securities Exchange having allocated an average of 19.8 supervisory board positions to women. However, it is important to point out that this is below the constitutional requirement of one-third and compares poorly with best-practice markets such as Norway, which is close to achieving 50-50 gender representation.

Mauritius

The 2016 Code of Corporate Governance of Mauritius provides that all organizations should have directors from both genders as members of the board. It also provides that all organizations shall have a nondiscrimination policy that covers its senior governance positions, including disability, gender, sexual orientation, gender alignment, race, religion, belief, and age.

In 2015, women represented only 7 percent of the boards of directors of the top 50 companies

(ranked by profits) in Mauritius. As of 2017, the percentage of female parliamentarians was 11.6 percent, ranking 150 out of 190 countries. Also, Mauritius ranked 113 out of 144 countries in the 2016 Global Gender Gap Report by the World Economic Forum.

Rwanda

A document of the Gender Monitoring Office in Rwanda, Key Gender Indicators and Baseline in Four Sectors, covered governance, agriculture, infra-structure, and private sector; it reported that women were 12.5 percent of private sector company board members.

Rwanda became the second African nation to announce a gender-balanced cabinet, with 50 percent of its members women. The country has received international recognition for female representation in government, with women making up 61 percent of parliament members.

California, United States

In the United States, California enacted a law mandating that companies incorporated in California—as well as out-of-state corporations (such as Delaware corporations) headquartered in California and listed on major U.S. stock exchanges—have at least one female director at the close of calendar 2019 or pay a fine. This makes California the first state in the United States to mandate the appointment of women to public company boards.

Nearly one-quarter of the approximately 400 California-headquartered companies in the Russell 3000 stock index have no female directors. As of September 30, 2018, 94 California companies had no women on their boards and will need to add at least one (Equilar, 2019).

Scope and Methodology:

The research intends using a panel data of 20 firms quoted on the Nigerian stock exchange for the time frame, 2011 to 2020. It uses a secondary data of annual reports and statements of accounts of this firms whose shares are quoted on the Nigerian Stock Exchange. There are 228 firms registered on the Nigerian stock exchange out of which 200 firms were selectable. The sample of the study comprises a random selection of firms registered on the Nigerian Stock Exchange (NSE).

This represents more than 5% of the entire population which is in line with the suggestions of Morgan & Krejcie (1970) in which a minimum of 5% of a definite population is seen as a suitable sample size in reaching a conclusion. The panel research design within the domain of longitudinal research design is what this study intends adopting. This is because panel research designs are mainly sturdy in handling the dangers of unit heterogeneity and temporal volatility (Halaby, 2003; Allison, 1994; Hsiao, 2004; Maddala, 1987; Paseda, 2006; Paseda, 2016) and are considered suitable for cause and effect studies.

The Hausman test will be carried out to determine whether to use Fixed Effects or Random Effects regression. It examines the null hypothesis that the random effects estimator's coefficients are the same as the consistent fixed effects estimator's coefficients (Hajek et al., 2015). The Fixed Effects (FE) regression will be used in this investigation. FE regression is a method that is particularly useful in the context of causal inference (Gangl, 2010). Whereas standard regression models

provide biased estimates of causal effects when there are undetected confounders, FE regression is a method that can offer impartial estimates in this situation (if certain assumptions are true) (Brüderl & Ludwig, 2015).

Table 1: List of Sample Firms

S/N	Sample Firms	S/N	Sample Firms
1	CAP Plc.	11	Nestle Nigeria Plc.
2	A. G. Leventis Plc.	12	Lafarge Africa Plc.
3	Berger Paint Plc.	13	Cadbury Nig. Plc.
4	Beta Glass Plc.	14	UACN Plc.
5	Champion Breweries Plc.	15	P Z Cussons Nigeria Plc.
6	Guinness Nigeria Plc.	16	Union Dicon Salt Plc.
7	Nigerian Breweries Plc.	17	Unilever Nigeria Plc.
8	Dangote Flour Mills Plc.	18	Nascon Plc.
9	Dangote Sugar Refinery Plc.	19	Honeywell Flour Mills Plc.
10	Glaxosmithkline	20	May & Baker Plc.

Source: Authors' Selection from the Nigerian Stock Exchange

Dependent Variable

Return on Assets (ROA) is used to represent financial success in this study. Profit before interest and taxes as a percentage of total assets is how this is calculated. This performance metric was chosen because it covers the basics of business performance in a holistic manner, taking into account both income statement performance and the assets needed to sustain an establishment.

Independent Variable

This is represented by FBM which is the fraction of females on board to the entire board size of a firm.

Control Variable

Firm size, represented by FSize, is the logarithm of total assets owned by each company in natural logarithms, and Firm age, represented by FAge, is the natural logarithm of year of incorporation till 2020, were controlled in this work. This is as a result of the fact that many studies (Ilaboya & Ohiokha, 2016; Majumdar, 1997) established a positive association between them and firm performance.

Specification of Model

The following is the regression model used to test the association between the gender mix of the Board of Directors and business success:-

$$ROA = \beta_0 + \beta_1 FBM_{i,t} + \beta_2 FSize_{i,t} + \beta_3 FAge_{i,t} + \mu_{i,t} \quad (1)$$

Where:

ROA = Return on Assets

β_0 = Intercept Coefficient

FBM_{it} = Female Board Member

$FSize$ = Firm Size
$FAge$ = Firm Age
μ_{it} = Gaussian white noise
There are three major approaches to panel data analysis: general constant, random effect, and fixed effect.
0 is set equally for all firms in the common constant form. It means that there are no differences between the firms under analysis and that the data set is *a priori* uniform. Nonetheless, since it does not require the application of fixed and random effects in its calculation, the common constant is believed to be narrow. The focus in the Fixed Impact Model moves to all real effects that, first and foremost, belong to a single firm and, second, do not alter over time (i.e., time-invariant)
It also allows for different constants for different cross-section sets. Unbalanced panels may also benefit from fixed effects. The following is a representation of the fixed effect model:

$$ROA_{it} = \beta_0 + \beta_1 X1_{i,t} + \beta_2 X2_{i,t} + \beta_3 X3_{i,t} + \cdots + \beta_N XN_{i,t} + \mu_{i,t} \quad (2)$$

This technique is customarily used for data sets where there is a huge number of firms. Alternatively, the random effect implies that the term, β_0, is the total of a general constant, α, and a time-invariant variable, $\mu_{i,t}$, that is unassociated with the leftover, $\mu_{i,t}$. The random effect model can be written as follows:

$$ROA_{it} = (\beta_0 + \emptyset_i) + \beta_1 X1_{i,t} + \beta_2 X2_{i,t} + \beta_3 X3_{i,t} + \cdots + \beta_N XN_{i,t} + \mu_{i,t} \quad (3)$$

Where $\emptyset_i$ is a regular random variable with a zero mean. This model is primarily used to balance all of the benefit for all of the firms in the same group; it is a less sophisticated approximation than the fixed effect model. When the unobserved effect is presumed to be unassociated with all explanatory variables, the random effects estimator is suitable. The random effect model, on the other hand, necessitates more explicit rules; otherwise, the results will be skewed or invalid.
Fundamentally, the conclusions proposed by these two models are different. Each firm differs as a result of its intercept term in a fixed effect model, while each firm differs in its error term in a random effect model.
The combination of cross sectional and time series data is identified as panel data. As a result, panel data analyses are used for two primary purposes. First, researchers use this analytical methodology because it allows them to combine data from N cross-sections, such as companies and individuals, with data from the T time frame, such as years, quarters, months, and so on. Second, when examining the impact of multiple variables on a precise tentative variable, panel data analysis is optimal (Wooldridge, 2013). The following is a straightforward model for panel data analysis:

$$ROA_{it} = \beta_0 + \sum \boldsymbol{\beta_i} \boldsymbol{X}_{i,t} + \mu_{i,t} \quad (4)$$

Where ROA stands for Return on Assets (the dependent variable or regressand), **Xit** is a vector of explanatory variables or regressors such as board size of firm *i*, board nationality of firm *i*, independent board of directors of firm *i*, and women on board of firm *i*; β_0 is the constant coefficient of the model, $\boldsymbol{\beta_i}$ are the slope coefficients, *i* and t respectively represent firms and time

while $\mu_{i,t}$ captures the error term.

Results and Discussion

The table 2 underneath shows the descriptive behaviour of the variables among the companies listed on the Nigerian Stock Exchange. From the outcome, on average, the size of female board members in Nigeria companies was just 15% of the entire board size and this implies that the size of female board members is very small compared to male board members in the Nigeria companies. Similarly, the maximum number of female on board was as low as 40 % which implies that the proportion of female board members were less than half of board composition across the companies in Nigeria. Still on gender diversity, the standard deviation value supported the previous outcome that there is wide disparity between the average proportion of female board members to entire board size. Checking the performance of the companies over time, on the average, the companies witnessed a positive return (12% average growth). The firm size also expanded over time with maximum size of 20 million averagely across the companies while the range of number of years of operation or incorporation of the companies was more than 4 years across the companies. Finally, the result of normality test showed that all the variables used in this study were normally distributed overtime from the Jarque-bera test for each of the variables and they were all significant distributed across time.

Table 2: Descriptive characteristics of gender diversity and financial performance

Variables	Obs.	Mean	Std. Dev	Max	Min	Jarque-Bera
Performance Variable						
ROA	200	12.37393	32.15867	301.2121	-127.298	17162.10
Gender diversity variable						
FBM	200	0.151750	0.111063	0.400000	0.000000	10.42296
Firm characteristics Variable						
FSIZE	200	17.00206	1.824253	20.23903	10.95583	105.0012
FAGE	200	3.773177	0.593877	4.465908	1.386294	0.593877

The study also corrected and checked the multicollinearity issues of the female board members, firm age and firm size by dropping all other variables that are perfectly correlated and hence ensure robust empirical result and provided estimates that are efficient to measure the relationship between female board size and firm performance in Nigeria. From the table 3 correlation analysis evidenced that after dropping some of the explanatory variables, there were no form of perfect collinearity among the variables used in the study. For instance, the correlation coefficient between female board members, firm age and firm size were significantly low as 0.12, -0.02, and 0.27 respectively. Hence, this suggest that the variables included in this study have no of multicollinearity among them and then we proceeded to estimate the coefficients to measure the relationship between female board members and firm performance.

Table 3: Correlation Analysis and Multicollinearity

Variables	ROA	FBM	FSIZE	FAGE
ROA	1			
FBM	-0.093678	1		
FSIZE	0.262246	0.262246	1	
FAGE	-0.093678	-0.0248	0.106833	1

Table 4: Hausman test

Test cross-section and period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.458642	3	0.0913
Period random	3.839087	3	0.2794
Cross-section and period random	2.882454	3	0.4101

The study carried out Hausman test to choose the most suitable static panel regression model to estimate the coefficients to measure the relationship between female board members and firm performance. From the Hausman test result in table 4, the null hypothesis was there is no fixed effect in the unobserved effect across the firm while the alternative hypothesis was there is fixed effect in the unobserved effect across the firms. The decision was that random effect panel

regression was more suitable as there was evidence to reject the null hypothesis of no fixed effect in the unobserved effect at 5% level of significant (p> 0.05). Hence, the study adopted random effect panel regression to measure the relationship between board gender diversity and firm performance.

Table 5: Panel Regression Results

Explanatory variables	Random effect	Fixed Effect
FBM	1.960582	-13.4704
	(23.1684)	(32.831)
LOG(FSIZE)	-209.2622	-272.468
	(60.50762)	(304.2897)
FAGE	-0.88484	37.79891
	(5.040306)	(26.92344)
R Sq	0.063108	0.31198
Ad -R Sq	0.048768	0.185024
S.E of Regression	28.93172	29.03157
F-statistic	4.400769	2.457383
Prob(F-statistics)	0.005068	0.000139

Note *, ** and ***indicate significance at the 10%, 5% and 1%

() indicate standard error

The random effect panel regression model yields similar results as those obtainable in fixed regression but little difference. Table 5 showed there is positive relationship between gender diversity and business performance although the result is not significant enough in Nigeria listed companies. This suggest that when firms increased the proportion of female board member in the board by 1%, this strategic action would influence firm performance proxy as return on asset to increase by 19%. This insignificant of the result may be attributed low participation of female board in the organization and as well as pressures of gender inequality. The evidence of positive influence on the financial performance of the board is that female directors were found to be more diligent in attending board meetings and they monitor performance as well as join committees more than male directors, they also increased stakeholder's confidence in a firm because they were limited in number compared to male board members. Out of the two control variables employed in this paper, only firm size was significant enough to influence financial performance of firms in Nigeria. The impact may be termed "economies of scale." This suggests that when firm expand its production and in order for it to achieve its growth objectives, it should increase in the proportion of female board members because women have tendency to improve financial, investment, and strategic decisions.

However, the robustness of the model was tested and this is provided in table 6. The overall significant of the model was tested using f-statistic, it was observed that gender diversity and the control variables included were significant to explain financial performance of firms at 5% significant level ($p<0.05$). In addition to the robustness of the result, diagnostic tests were also conducted as presented in tables 5. The result of the normality test showed the residual is normally distributed ($p<0.05$) and the result of the Breusch-Pagan LM and Pesaran scaled LM test revealed that there is no cross-section(correlation) in residuals at 5% level of significant.

Table 6: Robustness and Diagnostic Tests

Normality Test			
Jarque-Bera	11592.15		
Probability	0.000000		
Cross-Sectional Dependence Test			
	Statistics	**d.f**	**P= 0.05**
Breusch-Pagan LM	340.462	190	0.000000
Pesaran scaled LM	7.71854	190	0.000000

The result support the hypothesis that board gender heterogeneity positively impacts firm financial performance. According to Carter et al, 2003; and Shrader et al 1997, gender diverse boards improve the corporate governance structure, sustain good relations, provide valuable resources to entities (Carter et al 2010); and enhance corporate image (Luckerath-Rovers, 2013). Furthermore, the findings of the study were consistent with resource dependence and agency theories in which heterogeneity positively influences firm performance.

Conclusion and Recommendations

The aim of the research was to examine boards' gender heterogeneity and its influence on business viability. The presumption was that gender has an important role in a company's financial success. The outcomes of this study suggest that having a female director on a board and having a higher percent of female directors on a board has a beneficial impact on the firm's performance. This suggests that having numerous female directors is linked to increased income. It just serves to bolster the study's claims.

The number of women in senior managerial positions around the world, particularly in developing nations, is quite small. According to the findings, men constitute the average of 85 percent of board membership of the companies studied which can be attributed to male domination conditioned by

culture and religion. This is not fair in any way. The advocacy for women on boards has had little or no effect in Nigeria since the amount of womenfolk on boards is still negligible. In addition, even though empirical studies have shown that having a woman on a board of administrators has a progressive influence on financial outcomes, women's presence on boards should not be limited to their ability to contribute to financial performance. Promoting women to senior management positions is a matter of social equality, and as such, socially responsible businesses would refrain from discriminating against women. In addition to the unique factors that prevent women from rising to the top of corporate management and board levels in emerging economies like Nigeria, studies and circumstantial evidence have also identified some other challenges. These problems, according to the European Union, are divided into three (3) categories: societal, corporate, and person. Gender self-schema, social expectations and cultural bigotries about the role of women and men, inequitable nurturing of girls and boys, and societal reassurance of women to pursue supposedly "feminine" career paths that include little preparation for apex roles are all societal exclusionary factors. Typecasting leadership styles and roles, with a preference for 'male' leadership styles, are among the organizational practices that promote cold unity for women in the corporate world; and a lack of funding, as evidenced by emerging economies with limited capacity for senior female executives to feed the board, resulting in intersection/dovetailing committees. Others have been identified, including the use of constricted hunt requirements by proposing teams and setting pointless sophisticated skill tests for women, as well as the incidence of 'homophily,' which has been described as the propensity to shape new boards that look like the previous board in order to maintain board comfort and 'perceived' unity.

Older women's work issues and family obligations are two well-known individual obstacles that women face; failure to create a suitable time binder; job decisions, such as a preference for support staff roles that will not lead to peak positions; lack of zeal to promote oneself; women's aversion to encouraging other women, a lack of ambition, great reputational risks, and duty issues, as well as women's aversion to encouraging other women.

Nonetheless, as a result of the findings of this work, positive exertions should be taken by both businesses and governments of all echelons to enhance gender balance on boards, as it has a negative impact at the crux. This field of research would necessitate more examination into the definite or optimal number of females on boards that would result in enhanced performance, as well as experimenting other measures of business success, such as ROCE, ROE, and market measurements.

Specific recommendations for the board, firm/employer, regulator, and aspiring female director include:

For the board: Formal policies on board appointments should be enacted, definition of term limits for directors, recruitment beyond traditional networks, and integration of gender diversity into the company's succession-planning policy, among other actions.

For the employer: Useful steps include implementing internal goal-setting and career-progression programs for staff. Employer support is key, and employers are encouraged to create an enabling environment in which women are not discriminated against because of their status as wives and

mothers, and which fosters adequate work/life balance.

For the regulator: Recommendations include mandatory gender quotas and inclusion of a "comply or explain" philosophy in the provisions of the codes of corporate governance.

For the aspiring female director: Practical tips include adequate preparation, ownership, networking, education, and establishing a support system that accomplishes healthy work-life balance.

Upcoming research should look into the impact of female directors' qualities, credentials, and qualities on performance; how other board features interact with this putative relationship; and the function of the business's sector or industry in shaping these connections.

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