



Attributes of Board of Directors and Organizational Performance: A Case of Information and Communication Technology Companies in Nigeria

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ABSTRACT

There are evidences revealing that attributes of the corporate board contribute to increased organizational performance; however, studies are not forthcoming coming as to whether certain attributes of the board of directors like board diversity and board meetings may drive the performance of information and communication technology companies in Nigeria. Consequently, this study was carried out with the view to assessing whether attributes of the board of directors drive the performance of information and communication technology companies in Nigeria. Using ex-post facto research design, secondary data were gotten from financial statements of quoted information and communication technology companies on the floor of the Nigerian Exchange Group from 2012-2021. Data obtained were analyzed via descriptive and inferential statistical techniques. In specific, the fixed and random effect regression model showed that board diversity and board meetings contribute significantly to driving the performance of information and communication technology companies. Remarkably, it was found that while board diversity negatively drives performance, board meetings positively drive the performance of information and communication technology companies in Nigeria. In view of the findings, this study recommended that the management of information and communication technology companies should increase the number of board meetings while at the same time, keeping a moderate level of gender diversity in the boardroom in order to ensure increased market-to-book-value of their company.

Keywords: Board diversity, Board meeting, Communication Technology, Organizational Performance, Information technology.

1. INTRODUCTION

In both developed and developing nations, organizational performance has been a vital issue, given that all organizations whether small or large seek to find avenue via which they can increase their performance in order to remain sustainable. Harash, Al-Tamimi and Al-Timimi (2014) opined that organizational performance is the capability of organization to realize goals via efficient use of human, financial and material resources. Samuel (2021) asserts that increased performance can be realized with the efficient functioning of the board.

Fundamentally, companies are managed by the boardroom or board of directors together with other instituted committees (Akinwale & Ajide, 2020; and Ahmad, Sadiqa & Khan, 2021). Thus, it is not astonishing that prior studies showed that attributes of board of directors such as board meetings, board diversity, and board size, among others play vital roles not only in monitoring management but also in activities aimed at improving the performance of organizations (Hashed & Almaqtari, 2021; Nzimakwe, 2021; Shin, 2018; Zorn, 2017; Faleye & Krishnan, 2017; and Jeroh, Ekwueme & Okoro, 2015).

Jaiswal and Bernajee (2012) contended that board meeting is an efficient monitoring role which afterwards influences performance. On the other hand, Man and Wong (2013) showed that board diversity assists in the reduction of fraudulent activities in the organization. Whilst we acknowledged that the plentiful empirical evidences that attributes of corporate board contributes to increased organizational performance, studies are not forthcoming coming as to whether certain attributes of board of directors like board diversity and board meetings may drive performance of information and communication technology companies (ICT) in Nigeria. Consequently, this study was carried out with the view to assessing whether attributes of board of directors drive performance of ICT companies in Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Board Diversity

In recent times, the board of directors' composition have been subjugated by males. Diversity in boardrooms has now become a major contentious issue of governance of organizations. The term board diversity refers to the presence of females on the boardroom (Ekadah & Mboya, 2012). In contemporary organizations, presence of females on the board has been envisaged as a key driver of organizational performance (Marinova, Plantenga & Remery, 2010; and Fakeye, George, & Owoyemi, 2012).

In the Nigerian business environment, there are more male than female in the board of directors' composition due to the view that women should not be found more in the business and political environments. This has further hindered the board diversity philosophy in corporate governance of organizations in Nigeria (Lincoln & Adedoyin, 2012). Given the need to strike a balance between males and females in the boardroom, several governance codes showed that female representation on boardroom should be increased (Nguyen, 2017); the reason being that the presence of female in the boardroom has been found to contribute significantly to the performance of organization (Akinwale & Ajide, 2020).

In this study, we used board diversity as an attribute of board of directors' composition in assessing whether it drives performance of ICT companies in Nigeria. In this study, board diversity was measured by dividing the total number of female in boardroom of ICT companies by total board size (percentage of women directors on board).

2.2 Board Meeting

Board meeting refers to the frequency of meetings held by the board of directors of organization. Prior studies have shown that board meetings improve the effectiveness of the board as well as increasing the level of performance of the organization. Also, it has been contended that frequent meetings of the board provides directors with more opportunity to make improved decisions required to promote organizational performance (Mangena & Taurigana, 2008).

Ntim and Kofi (2011) observed that frequent board meetings can strengthen bonds among board members. Additionally, while frequent board meetings may be considered expensive, it can contribute significantly to increased managerial efficiency and performance of the organization. In this study, we used board meetings as an attribute of board of directors' composition in assessing whether it drives performance of ICT companies in Nigeria. In this study, board meeting was measured by the frequency of meeting held by the board of organizations.

2.3 Market-to-Book-Value Ratio (mbvr)

The concept of organizational performance is well researched in the management literature (Egberi, 2020a, Egberi, 2020b; Okoro & Ihenyen, 2020; and Egberi & Olufolahan, 2021). The term organizational performance refers to the ability of organization to realize growth and become sustainable in the light of competition. In this study, organizational performance was measured using market-to-book-value ratio (mbvr). Mbvr is the amount of financial resources a company can expect when they dispose its asset at the current market price (cmp). Thus, when a company settle all its debts, the remaining amount would be the company's book value. Nzimakwe (2021) sees mbvr as the market-level performance ratio employed in evaluating the market value of companies and their contribution to the aggregate market.

In the management literature, Mbvr has been used as a proxy for organizational performance given its vital place in evaluating the market value of companies and their contributions to the market (Sobhan, 2021). Usually, mbvr below 1.0 is seen as positive (i.e. the company is undervalued in terms of its stock) while a value above 1.0 is seen as negative.

3. RESEARCH METHODS

This paper used the quantitative research method (*ex-post facto* design) in assessing whether attributes of the board of directors serve as driver of organizational performance of ICT in Nigeria. The study population comprised all publicly quoted ICT companies on the floor of the Nigerian Exchange Group (NGX) from 2012-2021. However, given the small nature of publicly quoted ICT companies in Nigeria, a sample of seven (7) ICT companies were studied.

Secondary data were obtained from the annual reports and accounts of the ICT companies and the data consist of attributes of board of directors (board diversity and board meetings) and market-to-book value ratio. Thus, the dependent variable is market-to-book value ratio (proxy for organizational performance) while the independent variables are the attributes of board of directors boards diversity and board meetings). Given the dependent and independent variables of this study, the following models were estimated:

$$mbvr_{it} = \alpha_0 + \alpha_1 bgd_{it} + \alpha_2 bm_{it} + \varepsilon_{it}$$

Where: *Mbvr*=market-to-book value ratio; *bgd*=board diversity; *bm*=board meetings, ε_{it} =stochastic error term.

Table 1: Operationalisation of Variables

	Variables	Notation, Measurement and Source
1	Organizational Performance (Dependent Variable)	<i>Mbvr</i> was measured as market price per share divided by book value per share
2	Gender Diversity (Independent Variable)	Board diversity was measured by dividing total number of female in the board by total board size (percentage of women directors on board)
3	Board Meetings (Independent Variable)	Board meeting was measured via frequency of meeting held by the board

Source: Author's Compilation, (2022).

Data obtained were analyzed using both descriptive (mean, median, standard deviation, minimum value and maximum value, skewness, and kurtosis and Pearson correlation) and inferential (variance inflation factor, heteroscedasticity, fixed and random effects regression and Hausman specification test) statistical tools. The analyses of data were carried out using STATA 13.0 software.

4. RESULTS

Table 2: Descriptive Statistics

stats	mbvr	bgd	bm
mean	3.622286	11.36429	4.457143
p50	.79	11.805	4
sd	13.49584	12.31282	1.017039
min	-23.61	0	2
max	103.9	50	8
skewness	6.059152	.9028549	.8246726
kurtosis	45.54181	3.369488	4.353136
N	70	70	70

Source: Computed by the Researcher (2022)

Table 2 captured the mean and standard deviation and other descriptive results for each of the variables from 2012-2021. The result showed that board diversity (*bgd*) had the highest mean with a value of 11.36 while board meetings had the lowest with a value of 4.45 (*bm*) in terms of attributes of board of directors. The mean values showed that there are about 11 female members in the board with an average of four (4) meetings in the year for the ICT companies publicly quoted on the floor of the NGX.

More so, the standard deviation value of 13.49 was recorded by market-to-book-value ratio (*mbvr*), and board meetings (1.01), the least. The minimum value for *mbvr* is -23.61, *bgd* is 0 while *bm* is 2 while the maximum value for *mbvr* is 103.9, *bgd* is 50 while *bm* is 8. This indicates that the ICT companies had a minimum of two (2) meetings and a maximum of 8 minutes in a year, and a zero (0) number of female board members and maximum of fifty (50) board diversity.

Furthermore, the skewness values for *mbvr*(6.05), *bgd*(0.90), and *bm*(0.82) are positive; this implies that the attributes of board of directors moved in the same direction with the organizational performance measure (*mbvr*). Also, the kurtosis value for *mbvr* (45.54), *bgd* (3.36) and *bm* (4.35) are greater than 3 (a normal distribution); the kurtosis results revealed that the attributes of board of directors (*bgd* and *bm*) would result to a positive outcome for organizational performance.

Table 3: Pearson Correlation

	mbvr	bgd	bm
mbvr	1.0000		
bgd	-0.1645	1.0000	
bm	0.0114	-0.0824	1.0000

Source: Computed by the Researcher (2022)

Table 4.3 captured Pearson correlation result for dependent and independent variables for ICT companies in Nigeria. The result showed that while mbvr is positively related with bm(0.01), bgd(-0.16) negatively relates with mbvr. The Pearson correlation results suggest that there is positive relationship between mbvr and bm while a negative relationship was found between mbvr and bgd. In addition, the Pearson correlation result showed that no two attributes of board of directors independent variables) were perfectly correlated, because none of the Pearson correlation coefficients exceeded 0.8 (Gujarati, 2003 cited in Okoro & Egbunike, 2016). Consequent upon this, there is absence of multi-collinearity problems in the study model.

Table 4: Variance Inflation Factor

Variable	VIF	1/VIF
bgd	1.01	0.993203
bm	1.01	0.993203
Mean VIF	1.01	

Source: Computed by the Researcher (2022)

Table 4 showed that the VIF is 1.01 which is not greater than VIF benchmark of 10.0, suggesting absence of multi-collinearity problem in the model of attributes of board of directors and organizational performance.

Table 5: Fixed and Random Effects Results for Attributes of Board of Directors and Organizational Performance

<i>Parameters</i>	<i>Fixed Effect</i>		<i>Random Effect</i>	
	<i>Coeff.</i>	<i>Prob.</i>	<i>Coeff.</i>	<i>Prob.</i>
Bgd	-0.76 (-6.14)	0.000	-0.97 (-6.44)	0.000
Bm	0.93 (9.11)	0.000	0.98 (9.27)	0.000
_cons.	1.94 (22.17)	0.000	1.98 (23.01)	0.000
F-Ratio	23.55			
F-Prob.	0.000			
R-Squared (within)	0.871		0.891	
R-Squared (between)	0.781		0.792	
R-Squared (overall)	0.826		0.841	
Wald Ch2(6)			19.76	
Prob. Ch2			0.000	
Hausman	Chi2(2) = 6.40		Prob>Chi2= 0.92	

Source: Computed by the Researcher (2022)

Table 5 showed that the result of Random Effect (RE) coefficients are -0.97(bgd) and 0.98(bm) indicating that ICT companies' attribute of board of director (bgd) will result to approximately -0.97% decrease in mbvr while attribute of board of director (bm) will result to approximately 0.98% increase in mbvr. Thus, when there are more meetings held by the board to discuss financial matters of the company, it would result to increased organizational performance.

Furthermore, the attributes of board of directors and organizational performance measures were significant for both Fixed Effect (FE) (F-ratio =23.55; Prob. = 0.000 < 0.05), and RE (Wald Ch2 = 19.76; Prob.= 0.000<0.05) at 5% significance level. The

Hausman test ($\text{Prob} > \chi^2 = 0.92 > 0.05$) implies that RE is more efficient than FE. Also, RE t-test results for *bgd*(-6.44), and *bm*(9.27) revealed that attributes of board of directors are statistically significant; implying that attributes of board of directors (*bgd* and *bm*) drive the performance of ICT companies in Nigeria. Findings of this study corroborate with the results of Ebrahim, Abdullah, Faudziah and Yahya (2012); Okeke and Onuora (2020); and Ahmad, Sadiqa and Khan (2021).

5. CONCLUSION AND RECOMMENDATIONS

In the literature, there are ample evidences to show that the attributes of corporate board contributes to the performance of organizations. More so, researches are not forthcoming coming, particularly in the Nigerian context as to whether certain attributes of board of directors (board diversity and board meetings) serve as drivers of performance of ICT companies. Thus, this study was carried out with the view to filling the gap in the literature as regards whether attributes of board of directors drive performance of ICT companies in Nigeria from 2012-2021.

Using the fixed and random effect panel data regression model, the study showed that board diversity and board meetings contributes significantly to influencing or driving performance of ICT companies in Nigeria. On the other hand, it was concluded that while board diversity negatively influence or drive performance, board meetings positively influence or drive performance of ICT companies in Nigeria. Given findings of this study, this study recommended that management of ICT companies should increase the number of board meetings while at the same time, keep a moderate level of gender diversity on the board to ensure increased market-to-book-value of their company.

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