

**EFFECT OF BOARD CHARACTERISTICS ON FINANCIAL PERFORMANCE OF
QUOTED INFORMATION COMMUNICATION AND TECHNOLOGY
COMPANIES IN NIGERIA**

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Abstract

An effective board of directors has been argued to be a panacea for agency problems. This study empirically examined the effect of board characteristics on financial performance of quoted Information Communication and Technology (ICT) companies in Nigeria for a period of five years from 2013 to 2017. Using return on equity (ROE) as measure of financial performance, three board characteristics (board size, independence and gender diversity) were identified as possibly having effects on financial performance. Based on all the seven (7) quoted ICT companies as at December 2017, correlation and multiple least squares (OLS) regression were used to estimate the relationship between board characteristics and financial performance. Findings revealed that only board independence has significant effect on financial performance. The study recommended that a strong mechanism should be put in place to ensure that board of directors consists mostly of members with no personal interest in the organisation.

Keywords: Board characteristics, Performance, Corporate Governance. Quoted ICT companies

Introduction

Corporate governance has become a topical issue because of its immense contribution to the economic growth and development of nations. The absence of appropriate corporate governance has been attributed to be the major cause of failure of many well performing companies (Assenga, Aly & Hussainey, 2018). Owing to the ever-changing and overly competitive nature of today's business environment, regulators have become more critical of the smooth running of organisations and more importantly, boards are expected not just to monitor the management but also provide strategic directions and facilitate changes that are in line with the vision of the organisation (Bairathi, 2009). In order to achieve this, emphasis must be placed on the existence of a competent board that contributes to the sustainability of the firm. Therefore, it is crucial to estimate the impact of board characteristics on firm performance.

Board characteristics refer to features that can be used to measure the effectiveness and efficiency of corporate boards that are tasked with overall management of the firm. It is important to ensure good management system which is essential for good financial performance and have been widely recognised as an important corporate governance mechanism for aligning the interests of managers and all stakeholders to a firm. Effective board characteristics enhance the likelihood that owners of capital would be able to monitor the activities of the managers either directly through voting on crucial matters or indirectly

through the board of directors; which invariably would protect shareholders' investment (Levine, 2004)

The importance of corporate governance in the ICT sector cannot be over emphasised. This is due to the fact that the sector is experiencing rapid and clock-speed technological changes (McAfee & Brynjolfsson, 2008), which invariably tends to put pressure on firms in the sector to continually strive to adapt to changing market situations.

Corporate governance has attracted a multitude of studies to examine the relationship between board characteristics and financial performance (Assenga, Aly & Hussainey, 2018). However, these studies relate to more widely researched developed countries and cannot be generalised on developing countries such as Nigeria due to the differences in corporate governance structures and cultures; therefore, the study extends and contributes to the body of the research by investigating the likely effect of board characteristics on financial performance of quoted ICT companies in Nigeria.

Literature Review

Concept of Board Characteristics

The term corporate governance has been identified to mean different things to different people. The commonest being the one given by Lord Cadbury as the system by which companies are directed and controlled (Public Sector Governance Code, 2016). The Organisation for Economic Co-operation and Development (2005) also defined corporate governance as a set of relationships between a company's management, its board, its shareholders and other stakeholders; it provides the structure through which the objectives of the company are set, and the means of attaining those objectives as well as monitoring performance.

Board characteristics refer to features of corporate boards that are tasked with overall management of the firm. The success or collapse of firms is associated with the role acted by the management and firm governance as a process. In this paper, the characteristics of board of directors that were studied include board size, independence and gender diversity.

Board size

Board size refers to the number of directors in the board. It is an important factor in determining the effectiveness of the board. Jensen and Meckling (1976) argued that a bigger size board of directors may improve the companies' board effectiveness and support the management in reducing agency cost that resulted from poor management and consequently leads to better financial results. Shakir (2008) found a negative relationship between board size and firm performance which supported the conclusion of Jensen (1993) that for a firm to be effective in its monitoring, it should have a relatively small board of directors. Haniffa and Hudaib (2006) argued that a large board is seen as less effective in monitoring performance and could also be costly for companies in terms of compensation and increased incentives to shirk. On the contrary, prior studies regarding the size of the board supported the positive relationship between the sizes of the board of directors and corporate performance. Large boards are viewed to lead to a better business performance owing to the wide variety of skills

present for better decision making and monitor the performance of the chief executive officer (CEO).

Board Independence

Board independence refers to the state in which all or a majority of the members of a board of directors do not have a relationship with the company except as directors. According to Clifford and Evan (1997), an independent non-executive director is defined as an independent director who has no affiliation with the firm except for their directorship. There is an apparent presumption that boards with significant outside directors will make different and perhaps better decisions than boards dominated by insiders. Furthermore, Fama and Jensen (1983) concluded that non-executive directors play an important role in the effective resolution of agency problems of a firm and therefore their presence can lead to straightened and more effective decision-making in the firm.

According to Shamharir, Ishaku and Mohamad (2016), outside directors generally are viewed as professional referees who unbiasedly protect the shareholders' interests, helping to prevent or detect any management opportunistic behaviour. Hermalin and Weisbach (1991) found out that there is no relationship between firm performance and the proportion of outside directors.

Gender Diversity in Boards

There is an increasing awareness that the absence of women in the top position of management and boards of corporations is detrimental both to the social and the economic outcomes of those corporations (European Commission, 2010). This has, therefore, led the business agencies globally to come up with changes in corporate governance guidelines to incorporate women in the governance structure of their companies. While participation of women has in recent times increased in the middle-level management, little has changed at the level of corporate governance across the globe (Hede, 2000). It is said that corporate boards are dominated by the male gender mainly because most of the time, the appointing authorities are also male. This practice has, therefore, denied women the chance to be adequately represented. In addition, board diversity promotes creativity and innovation in the decision-making processes, which in turn enhances the firm's financial performance in the long run. Diversity improves information provided by the board to the management owing to special skill set, experiences and complimentary knowledge held by diverse directors. Diverse directors also provide access to important constituencies and resources in the external environment which increases the networks of the organisation, and promotes prosperity. Smith, Smith and Verner (2006) submitted that the presence of women in the board increases the board's ability to monitor the management more objectively, and that women in the board uplift the image of the organisation due to the positive signal they send to the labour, product and the financial markets. They further argue that problems are better handled within the board when both genders are appropriately represented.

Financial Performance

Financial performance is a measure of how well or poorly an entity is putting its resources into use. It measures the level at which financial objectives are being met. It measures the efficiency applied by a firm in the use of its assets to create profits.

There are two main reasons for the widespread use of financial performance measure as a tool to measure performance. The first reason being that profit articulates directly with the organisation's long-term objectives which are almost always purely financial. The second reason is that properly chosen financial performance measures provide an aggregate view of an organisation's performance (Thomsen & Pedersen, 2000). These results are reflected in the firms' Return on Equity, Return on Assets and Earnings per Share. Among other financial measures, ROE is a more superior measure on profitability and good indicator of corporate health since it indicates how well the management is doing as it shows how much profit each naira of common stockholders' equity generates (Agyei-Mensah, 2018).

2.2 Theoretical Review

The theoretical framework for the understanding of board characteristics is underpinned by the agency theory.

Agency Theory

Agency theory as postulated by Jensen and Meckling (1976) which is premised on the assumption that there is a separation between the management of an organisation and its ownership. The theory labels the owners of a firm as its principals and the management as its agent.

In its simplest form, agency theory explains the problems arising from the separation of ownership and control. It provides a useful way of explaining relationships where the parties' interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system. The agency relationship explains the association between providers of corporate finances and those entrusted to manage the affairs of the firm. Jensen and Meckling (1976) define the agency relationship in terms of "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent". Agency theory supports the delegation and the concentration of control in the board of directors and use of compensation incentives.

Owners' interests are likely to be compromised if agents make the most of their egoistic goals at the disadvantage of firm performance. The agents cannot be dependable and therefore there is a need for supervision of the executive managers by the board of directors so as to protect owners' interest. The agency problem arrives when "there is goal incongruence between the objectives of the principal and his agent and it becomes virtually impossible for the principal to keep track of what the agent is up to" (Eisenhardt, 1989). Therefore, the supervision of management undertakings is recognized as a vital responsibility of the board of directors. This is meant to minimise the agency problems so that higher organisational performance can be accomplished.

2.3.0 Empirical Review

2.3.1 Board Size and Financial Performance

Yermack (1996) evaluated a proposal for limiting the size of boards of directors in order to improve their effectiveness and found evidence to support the proposal. Using the least

squares regressions on a sample of 452 on large U.S. public corporations for periods covering 1984 to 1991, the study found an inverse relation between firm values, as represented by Tobin's Q, and the size of the board of directors.

Okiro (2006) studied companies quoted on the Nairobi Security Exchange between the year 2000 to 2002 to determine the relationship that exist among board size, board composition and firm performance. Tobin's Q was used as performance measure with company size and gearing being the control variables. Using the multiple linear regression models to analyze the data collected, the study concluded that there is no relationship between board size and financial performance.

In Sri Lanka, Somathilake (2018) investigated the effect of board characteristics on firm financial performance listed on Colombo stock exchange for a period of two years spanning between 2016 and 2017. The study revealed that board size has a negative but significant influence on company performance.

Gambo, Bello and Rimamshung (2018) examined the effect of board size, board composition and board meetings on financial performance of listed consumer goods in Nigeria and found that smaller board size are more effective than larger board size and are likely to enhance the return on asset of the firm. Therefore, hypothesise that board size has no significant effect on financial performance of Information Communication Technology companies.

2.3.2 Board Independence and Financial Performance

Bhagat and Black (2002) conducted a study on 934 largest US firms covering a 10 year period. They questioned the empirical validity of the need for board independence and its effect on performance. The study found that firms with a higher percentage of outside directors had significantly lower financial (ROA) and stock market (Tobin's Q) performance in the following three years. They also found that lower performing firms were more likely to add independent directors. However, the results offered no evidence that firms with more independent boards perform better.

Chan and Li (2008) found that independence of the audit committee (i.e. to have at least 50 per cent of expert-independent directors serve on audit committee) positively impacts the firm performance as measured by Tobin's Q. Similarly, Ilona (2008) showed that there is a positive relationship between audit committee independence and firm performance as measured by return on equity. Using data collected from top 100 companies listed in Colombo Stock Exchange, Somathilake (2018) concluded that director's independence has positive but insignificant influence on firms' performance in Sri Lanka.

Gambo, Bello and Rimamshung (2018) reported a positive relationship between board independence and return on asset of consumer goods companies listed on the Nigeria Stock Exchange. Their outcome showed that a higher proportion of outside directors in a board tend to result in higher performance. We, therefore, hypothesise that board independence has a significant impact on financial performance of Information Communication Technology companies.

2.3.3 Gender Diversity and Financial Performance

In their study on the effect of board characteristics on financial performance in Tanzanian firms, based on 80 firm-years observations and structured interview with key stakeholders, Assenga, Aly and Hussainey (2018) found that a significant and positive relationship exists between gender diversity and return on equity.

Marimuthu (2009) empirically examined the effect of demographic diversity on boards of directors with regard to firm financial performance. Demographic diversity was represented by ethnic and gender diversity while performance was measured by Return on Asset and Return on Equity. A series of least square regressions was used for data analysis and ethnic diversity was found to have a significant impact on performance.

Carter, D'souza, Simkins and Simpson (2010) used a sample that included firms in the S&P (standard and poor) 500 index for the five-year period 1998–2002. Using Tobin's Q & Return on Asset as financial performance measures, a positive and significant relationship was reported to exist between both the number of women on the board and the number of ethnic minorities on the board.

Letting (2011) averred that none of the board of directors' demographic characteristics had statistically significant moderating effect on the relationship between board attributes and firm financial performance. Priya and Nimalathasan (2013) studied some selected hotels in Sri Lanka. Their finding revealed that a concluded that number of women in the board were significantly correlated with return on asset and return on equity. Somathilake (2018) submitted that female directors' proportion has a negative effect on financial performance, though at a non- significant level.

Rafinda, Rafinda, Witiastuti, Suroso and Trinugroho (2018) provided evidence on board diversity, risk and sustainability of bank performance in India for periods covering 2011 to 2015. Based on the regression results, the study showed that the presence of female directors has no significant impact on banks' performance. Therefore, hypothesise that gender diversity has no significant effect on financial performance of Information Communication Technology companies.

3.0 Methodology

The data for this research were generated through secondary source. Explanatory research design was used as it has to do with studying a situation or a problem in order to explain the relationships between variables. The variables considered in this study include board size, board independence and gender diversity as independent variables, while return on equity is the dependent variable. Data on these variables were collected from annual financial reports of all the seven quoted ICT companies as at December 2017 covering a period of five years from 2013 to 2017 and were analyzed using correlation and multiple regression. Owing to the fewness of quoted ICT companies in Nigeria, the population also makes up the sample for the study. We choose to start in 2013 since it is the first year after the mandatory compliance with the International Financial Reporting Standards in Nigeria. Similarly, 2017 was chosen as the end-year because it is the most recent year for which data were available.

Model was specified for the study in line with previous study of Assenga *et al* (2018) which was stated as follows:

$$ROE_{it} = \alpha + \beta_1 BSIZE_{it} + \beta_2 OUT_{it} + \beta_3 CEOD_{it} + \beta_4 FODIR_{it} + \beta_5 SKILL_{it} + \beta_6 FEMDIR_{it} + \epsilon_{it} \dots \dots \dots (\text{equation i})$$

Where Bsize= board size, Out= Outside directors, CEOD=CEO duality, FODIR= foreign director, SKILL= competencies of board members, FEMDIR= gender diversity,

The model was adapted for the study as follows:

$$ROE = \beta_0 + \beta_1 BOS + \beta_2 BIND + \beta_3 BGD + \mu \quad (\text{equation ii})$$

Where: ROE is Return on equity

BOS is Board size

BIND is Board independence

BGD is Board gender diversity

β_0 = slope of the model

$\beta_1, \beta_2, \beta_3$ = coefficient of parameters

ROE was computed as profit after taxation as a percentage of shareholders equity.

Board size was measured as total number of members of the board while board independence was taken as proportion of independent directors to total directors. Board gender diversity was computed as proportion of females present in a board.

4.0 Data Analysis and Interpretation of Results

4.1 Descriptive Statistics of Variables

Table 1 shows the descriptive statistics of all the variables used in the study. It was revealed that the mean of the dependent variable, return on equity (ROE) is .006, with maximum value of 1, minimum value of -0.36 and a standard deviation of 0.268 from the mean value. This implies that companies in the ICT sector in Nigeria have a low return on equity, which may affect the confidence of potential investors about investing in shares of quoted ICT companies. The mean value of the board independence (BIND) is 1.70, with a maximum value of 4, minimum value of 0 and a standard deviation of 1.094 from the mean value. This implies that the independence of the boards of the companies in ICT sector is considered mildly low, which in turn, indicates that most of the directors of quoted ICT companies have personal interests in the company and this could lead to conflicts of interest, if not well managed.

Furthermore, the mean value of the board size (BOS) is 8.34 with a maximum value of 12, minimum value of 5 and a standard deviation of 2.189 from the mean value. This implies that there are sufficient members on the boards of companies in ICT companies to make effective decisions.

Furtherstill, the mean value of the board gender diversity (BGD) is 0.12 with a maximum value of 2, minimum value of 0 and a standard deviation of 0.112 from the mean value.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	35	-0.36	1	.006	.268
BOS	35	5	12	8.34	2.169
BIND	35	0	4	1.70	1.094
BDG	35	0	2	.12	.112
Valid N (listwise)	35				

Source: Authors' computation, (2018)

Correlation Analysis

The Pearson Moment Correlation was carried out on both the dependent and independent variables to check for multicollinearity and relationship between the various variables in the study. Gujarati and Porter (2009) and Hair, Black, Babin and Anderson (2010) reasoned 0.8 as the threshold at which multicollinearity concerns can be harmful to the regression analysis and make the reliability or the positive power of the model as a whole to be reduced. The correlation matrix as shown in table 2 indicates that the assumption of multicollinearity has not been violated because none of the variables is greater than 0.8. The result showed that out of the independent variables (board size, independence and gender diversity), only board independence has a positive correlation with the dependent variable: return on equity.

Table 2: Result of Pearson Correlation Analysis

Variables	ROE	BOS	BIND	BDG
ROE	1			
BOS	-0.114	1		
BIND	0.190	-0.196	1	
BDG	-0.053	0.210	-0.483	1

Source: Authors' Computation (2018)

Results of Regression Analysis

From Table 3, findings shows that R square of the model is 0.361 indicating that 36.1% of the changes in the regressed (return on equity) can be explained by the regressors (board characteristics) and by implication 63.9% of the variation in return on equity can be explained by some other factors/variables not considered.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546 ^a	.361	.330	.273

a. Predictors: (Constant), BDG, BOS, BIND

Source: Authors' Computation (2018)

From table 4, the model can be expressed in econometric form as follows:

$$ROE = 0.265 - 0.019BOS + 0.057BIND - 0.067BDG$$

Return on equity will be 0.265 in the absence of board size, board independence and board gender diversity.

Board size (BOS) was observed to be inversely related with return on equity indicating that an increase in board size will result in a decline of return on equity by 0.019 and also not significant at 1%, 5% and 10% significance level. Therefore, the study fails to reject the null hypothesis that board size has no significant effect on financial performance of Information Communication Technology companies. This finding is in consonance with that of Okiro (2006) who posited that there is no relationship between board size and financial performance.

From the regression results, board independence (BIND) is statistically significant at 1% significance level in explaining changes in return on equity. There is also a significant positive relationship between board independence and return on equity. By implication, an increase in board independence will increase the return on equity by 0.057. Thus, the null hypothesis was rejected in favour of the alternative hypothesis that board independence has a significant effect on financial performance of Information Communication Technology companies. This result is in line with a-priori expectation and Chan and Li (2008) whose result showed that a significant positive relationship exists between Tobin's Q and independence of the audit committee. This finding is also in agreement with that of Gambo *et al* (2018) who found a positive relationship between board independence and return on asset.

Board gender diversity (BGD) was also observed to be negatively related with return on equity indicating that an increase in gender diversity will result in a decline of return on equity by 0.067. Thus, the study fails to reject the null hypothesis that board gender diversity has no significant effect on financial performance of Information Communication Technology companies as the P value of 0.890 is not significant at all levels.. This is in agreement with the finding of Letting (2011) who submitted that there was no significant relationship between gender diversity and financial performance and that of Rafinda *et al* (2018). This finding, however, is in conflict with that of Priya and Nimalathan (2013) and that of Assenga *et al* (2018) who maintained that gender diversity has effect on financial performance.

Table 4: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	P-Value
	B	Std. Error	Beta		
(Constant)	.265	.227		1.168	.252
1 BOS	-.019	.022	-.154	-.860	.396
BIND	.057	.049	.234	1.171	.003*
BDG	-.067	.479	-.028	-.139	.890

a. Dependent Variable: ROE

*Significant at 1% level

Summary and Conclusion

The study examined the effect of board characteristics on financial performance of quoted information communication and technology companies. The findings revealed that only board independence is significantly and positively associated with return on equity. Board size and gender diversity were non-significant and negatively related with return on equity. The study, therefore, concludes that board independence has a significant impact on financial performance of quoted Information Communication and Technology Companies in Nigeria.

Recommendations

Based on the findings of this study which indicate a positive and significant relationship between board independence and return on equity, the study recommended that a strong and mandatory corporate governance mechanism should be put in place to ensure that board of directors consists mostly of members that are independent of the firm, both directly and indirectly.

References

- Assenga, M.P., Aly, D. & Hussainey, K. (2018). The impact of board characteristics on the financial performance of Tanzanian firms. *Corporate Governance : The International Journal of Business in Society*, Advance online publication. DOI: 10.1108/CG-09-2016-0174
- Agyei-Mensah, B.K.(2018) "Impact of corporate governance attributes and financial reporting lag on corporate financial performance", *African Journal of Economic and Management Studies*, <https://doi.org/10.1108/AJEMS-08-2017-0205>
- Bairathi, V. (2009). Corporate governance: A suggestive code. *International Research Journal*, 11 (6), 753-754.
- Bhagat, S. & Black, B. (2002).The non-correlation between board independence and long-term firm performance. *Journal of Corporation Law*, 27 (2), 231–274.
- Carter, D. A., D'Souza, F., Simkins, B.J. & Simpson, W. G. (2010), The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance, *Corporate Governance: An International Review*. 18(5), 396–414.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management review*, 14(1), 57-74.

- Gambo, J., Bello, A., Rimamshung, S. (2018). Effect of board size, board composition and board meetings on financial performance of listed consumer goods in Nigeria. *Canadian Center of Science and Education*. 11(6), 1-10.
- Hede, A. (2000), Affirmative action in Australia: employment equity at the crossroads. In Davidson.M, and Burke. R (Eds.), *Women in Management: Current research issues*, 2,279-294.
- Hermalin, B. & Weisbach, M. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management*, 20,101-112.
- Jensen, M.C & Meckling, W.H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Financial Economics*, 3(1),305-360.
- Letting, N.K. (2011). Board of Directors' Attributes, Strategic Decision-Making and Corporate Performance of Firms Listed on the Nairobi Stock Exchange. Unpublished PHD Thesis, University of Nairobi.
- Levine, R. (2004). "Finance and Growth: Theory and Evidence." Unpublished paper prepared for handbook of Economic Growth.
- Marimuthu, M. (2009). Ethnic and Gender Diversity in Boards of Directors and Their Relevance to Financial Performance of Malaysian Companies. *Journal of Sustainable Development*, 2(3), 139-148.
- McAfee, A., and Brynjolfsson, E. 2008. "Investing in the It That Makes a Competitive Difference," *Harvard Business Review* (86:7/8), 98-107.
- Okiro, K.O. (2006). The relationship between board size and board composition and firm performance: A study of quoted companies at the NSE. Unpublished MBA Project, University of Nairobi Organisation for Economic Cooperation and Development (2004).
- Priya, K. & Nimalathasan, B. (2013). Board of directors' characteristics and financial performance: A case study of selected hotels and restaurants in Sri Lanka. *Merit Research Journal of Accounting, Auditing, Economics and Finance*. 1(2), 18-25
- Rafinda, A.; Rafinda, A.; Witiastuti, R.; Suroso, A. & Trinugroho, I. (2018). Board diversity, risk and sustainability of bank performance: Evidence from India. *Journal Of Security and Sustainability Issues*. 7(4), 793-806.
- Shakir R.A (2008). Board size, executive directors and property firm performance in Malaysia. Pacific. *Rim property research journal*, 14(1).
- Smith, N., Smith, V. & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2500 Danish firms. *International Journal of Productivity and Performance Management*, 55(7), 569-593.
- Somathilake, HMDN. (2018). The effect of board characteristic on firm financial performance. *Global Scientific Journal*, 6(5), 117-126.
- Thomsen, S., & Pedersen, T. (2000). Ownership structure and economic performance in the largest European companies. *Strategic Management Journal*. 21 (6), 689-705.
- Yermack, D. (1996). Higher market valuations for firms with a small board of directors. *Journal of Financial Economics*, 40(2), 185-211.

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