



Board Diversity and Dividend Policy of Listed Health Care Companies in Nigeria: The Moderating Effect of Financial Performance

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JEMT/2023/v29i71121

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/100996>

Original Research Article

Received: 12/03/2023

Accepted: 17/05/2023

Published: 18/05/2023

ABSTRACT

This paper examines the moderating effect of financial performance on the relationship between board dynamism and dividend payout of listed healthcare companies in Nigeria. Data were collected from the annual reports and accounts of 10 healthcare companies listed on the Nigerian Exchange Group over a period of 2011 to 2021. Ex post facto research design was employed and secondary data was sourced through annual reports of listed health care companies. Descriptive statistics and inferential statistics were employed to analyse the data using panel regression technique. The results show that board gender has a significant negative effect on dividend payout prior to moderation. Results however, changed to a significant positive effect when moderated with

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financial performance. Specifically, gender diversity, board qualification and board nationality have significant positive effects on dividend payout. In addition, financial performance significantly moderates the relationship between gender diversity and dividend payout. Impliedly, health care companies with more female directors perform better and tend to pay more dividends, Based on the findings of the study, there should be a policy decision of Nigerian healthcare firms that will give female directors a quota on the board of directors to be composed of women directors who have more corporate experience. The regulators should also encourage boards of Nigerian healthcare firms to consist of a more diverse board to positively foster performance, thus improving dividend payout. Managers of the Nigerian healthcare firms should ensure that more foreign directors are appointed to serve on their board to achieve a more favorable dividend policy. This can be achieved through direct foreign investment in the Nigerian healthcare companies.

Keywords: Board diversity; dividend policy; financial performance; health care companies.

1. INTRODUCTION

“Dividend policy relates to the firm’s dividend payout policy, which managers pursue deciding the way and amount of cash distribution to shareholders over time” (Uwuigbe, 2016). “Payment of dividends also reduces the amount of cash at the management’s disposal, which further makes the study of the effect of board characteristics on dividend policy imperative because it has the potential of reducing the agency costs that characterize modern firms” [1]. “Two notions support the assertion that dividend policy can be an effective means of mitigating agency cost. First, is the idea that shareholders prefer dividend rather than capital gain because the promise for incremental value on the stock in the future is riskier. Second, based on the agency theory and shareholder theory model, dividend policy can be a mechanism for mitigating agency costs” [2].

“The increasing public interest and debates surrounding board mechanisms support the idea that corporate board diversity may affect dividend payout” [3,4] (Al-Najjar & Hussainey 2009; Khan, Mihret & Muttakin 2016; Ntim et al. 2017). “Specifically, in the face of rapid changes in corporate dividend policies, it has become pertinent to understand the central drivers of corporate dividend policy in Nigeria. Empirical evidence regarding the impact of board diversity on dividend payout policies in the Nigerian context are only recently beginning to emerge” (Uwuigbe 2016).

“Female directors are expected to be effective in meeting attendance and adhere more to ethical codes and standards than their male counterparts. So, a board diversified with more female directors is expected to have improved performance” [5]. “Another area of board

dynamism is the nationality of its members. Foreign investors are seen as long-term investors which have significant incentives to monitor the managers in order to protect their wealth. This monitoring role played by foreign investors is expected to curtail the opportunistic tendencies by managers. Again, the number of foreign directors maintained by an organization could go a long way in determining the level of dividend payout ratio in the firm” [6]. Moreover, board age could have a significant relationship with dividend payout ratio. There are two conflicting arguments about board age. First, it is the opinion of this study that younger board members are risk takers and can drive more returns on investment and hence leads to increased dividend payment; however, older board members are risk averse and as such could only attract minimal returns on investment and thereby limiting them in dividend payment to shareholders. Likewise, the qualification of the board members could serve as a drive for more dividend payment. Those with higher education know what it takes to invest and what good fortune the payment of dividend to shareholders could bring to their firm [7].

In another dimension, financial performance is a joint force for all stakeholders of companies, whether management, regulators, shareholders, potential investors, government, and regulators. This group of people will be interested in the structure of the board which seems to drive higher financial performance which will eventually translate into high dividend payment to the stakeholders who have interest in organisation. May organisational decisions depend on the firm’s present earnings and the potential for generating future profits. This means that companies that are more profitable are expected to have more cash available for dividend payments [8]. Also, financial

performance can enhance shareholders' investment willingness and thus help to predict corporate outcomes. Since organizational outcomes, which are influenced by the board dynamism, are affected by firms' profitability, it is expected that improved financial performance and dynamism will both influence the dividend pay-out decisions. It against this backdrop that financial performance is used to moderate the relationship between board dynamism and dividend pay-out ratio of listed Healthcare firms in Nigeria.

"Prior research on the relationship between board dynamism and dividend policy has largely focused on companies in the UK and U.S and other industrialize countries, where the markets and boards are widely regulated. In Nigeria, to the best of our knowledge, there is dearth of research works" [9-13] (Elmarghi et al., 2017; Nguyen, 2017). In addition to financial performance as a moderator to examine their cumulative effect on dividend payout ratio.

The empirical investigation of the relationship between board dynamism and dividend payout ratio has produced different outcomes. This may be because they used different samples, covered different time-periods, different data sets and different domains. However, due to this, there are various divergent views about the role of board dynamism on dividend payout ratio of firms. For example, some scholars such UI Ain, Yuan, Javaid, Zhao and Xiang [14], Dissanayake and Dissabandara [15], Almeida, Firmino and Coelho [16], Gyapong, Ahmed, Ntim and Nadeem [17], Adamu, Ishak and Hassan [18], Chen, Leung and Goergen [19], Byoun, Chang and Kim [20] are of the view that board dynamism have positive influence on dividend payout ratio, while Nwidobie [21], Suwaidana and Khalaf [22], Pucheta-Martínez and Bel-Oms [23], Okafor, Ugwuegbe, Ugochukwu and Ezeaku [24], Sindhu, Hashmi and Haq [25], Ibrahim and Shuaibu [26], Dandago, Farouk and Muhibudeen [27], Aydin and Cavdar [28] have contrary view that board dynamism have inverse relationship with dividend payout ratio. Therefore, it can be concluded that available literatures in this area are mixed and inconclusive. Therefore, there need to introduce a moderator variable (financial performance) to ascertain whether the direction of the variables changes after moderation.

Furthermore, most studies in this area were either conducted in conglomerate sector or non-financial sector [21] (Dandago, Farouk &

Lateefat, 2014). Also, Ibrahim and Shuaibu [26] used the banking sector but consider dividend policy but not the payout ratio. Therefore, none has specifically covered the Healthcare firms in Nigeria. Based on the identified gap in literature, this study seeks to investigate the moderating effect of financial performance on the relationship between board dynamism and dividend payout ratio of listed healthcare firms in Nigeria. The Study tests the broad hypotheses: Financial performance has no significant moderating effect on the relationship between board dynamism and dividend payout.

The study covers period of 10 years starting from 2011 to 2021. The healthcare firms were studied because of their importance to the growth of the Nigerian economy. The COVID-19 pandemic has exposed the importance of healthcare firms globally. It is therefore imperative to examine the drivers of dividend payout in the sector with the aim of understanding how capital investments can be enhanced. Four proxies of board dynamism (board gender, board qualification, board age, and board nationality) were used in the study, while the ratio of dividend declared to number of ordinary shares is used as proxy for dividend payout ratio.

The outcome of this study should be of particular interest to several parties including regulatory authorities, shareholders, accounting educators and other stakeholders in general. This research therefore may be relevant to the regulatory authorities like the Security and Exchange Commission in the sense that it will help them evaluate the effectiveness of their monitoring instruments as well as review and upgrade them where necessary.

The results could provide empirical evidence that may help investors in monitoring and protecting their investments by checking the activities of the managers. The study can also be of great usefulness to accounting educators as the outcome of the study could serve as motivation for further research.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Review

2.1.1 Concept of dividend payout

Dividend policy is the term used to describe a company's decision on the payment of dividend to its shareholders. It involves determining what

the companies distribute the amount of profit to shareholders and what should be reserved for future expansion. The literature points that dividend reduce the free cash flow problem [29], which tends to entrench managers and make them invest in projects that do not maximize value to the firm. Payment of dividend, for example, can reduce the cash available to managers and therefore prevent them from over-investment or under-investment. Thus, dividend payout policy is a crucial component in resolving the shareholder-manager conflict.

There are various reasons why firms should pay or not pay dividends. For example, the dividend payout is significant for investors because dividends provide certainty about the company's financial well-being. Also, dividends are attractive for investors looking to secure current income, and dividends help maintain the share price. Firms that have an old history of stable dividend payouts would be more adversely affected by reducing or omitting dividend distributions. The firms would be positively affected by increasing dividend payments or making additional payments of the same dividends. More so, companies without a history of dividend payout are generally perceived favorably when they declare current dividends.

2.1.2 Board dynamism

"Board diversity is defined as the variation of the age, race, ethnicity, gender, and social/cultural identities among employees within a specific corporation" [30]. Van der Walt and Ingley [31] have defined "diversity in the composition of the Board as the varied combination of attributes, characteristics, and skills that their members have". "This definition is also applied to the top management of an organization. Women and minorities have historically been under-represented on corporate boards of directors, but this began to change in the 1990s" [10]. "Usually, two categories of diversity are considered. The first one is demographic diversity. This type is observable because it is based on easily detectable factors, such as sex, race or level of education. The second type cannot be observed and needs cognitive considerations because it refers to non-visible attributes such as knowledge, skills, profiles and individual capabilities" [32]. Board diversity, therefore, is defined as the heterogeneity among board of directors in respect to gender, nationality, age and qualification.

Gender Diversity

"Research on women as directors on boards have focused on women's under-representation on board of directors and this continues to be well documented by many scholars" [33]. "There exists two statistics about women's representation on board which are commonly reported. These are the percentage of board seats held by women, and the percentage of organizations that have one or more women on their boards. Many research show a much lower percentage of board seats held by women than the percentage of companies with a woman on their board" [15].

Previous studies such as Catalyst [34] have argued that "diversity promotes better understanding of the marketplace by matching the diversity of directors to that of customers and employees hence increasing market penetrability". Carter, Simkins and Simpson [35] have explained "the relationship between board gender diversity and firm performance based on the agency theory. They posit that board gender diversity enhances the board's ability to monitor top management. In addition to this, they argue that increasing the number of female directors may increase the board's independence since women tend to ask questions that male directors may not ask".

Board Qualification

Empirical studies on the corporate outcome of board qualification is scanty. However, few studies attempted to establish the link educational qualification of directors to financial performance of firms is scanty. Bilimoria and Piderit [36] examined "board qualification using tenure, age, director type education rather than educational qualification". With the inclusion of educational qualification in the index for evaluating corporate governance (Institutional Shareholders Service (2006), Yermack [37] investigated "share price reaction to director's educational qualification. His result reveals that share price reaction are sensitive to director's qualification, particularly in the area of accounting and finance". However, a meta-analysis of board composition, leadership structure and firm performance carried out by Dalton et al. [38] covering 54 studies of board composition and 31 studies of board leadership structure did not show any systematic relationship between board composition and firm performance. Based on the outcomes of the work

of Carter et al. [39], a wrongly constituted board yields to poor corporate governance, and the latter creates a big hole in the earnings profile of the firm.

Board qualification is captured in this study as the average qualification of directors in a particular year. Weights are assigned to each degrees, 3 for PhD, 2 for Masters and 1 for B.Sc and others). This classification supports that of Farouk [40].

Board Age

Board directors with different ages have collections of practical knowledge, skills, trade practices, ethnics and gender mixes, making them adequately equipped to address abroad spectrum of concerns confronting an organization. Board directors with long experience have practical knowledge, trade practices, educated skills, are adequately equipped to administer a broad spectrum of concerns confronting the organization and equip administrators with information and deliberation. Overall, the current literature on directors' age favors younger directors. Even though older directors may have the advantage of a better experience, they are inclined to be less eager to embrace change and implement new innovative policies. There is still a contradiction in age factor and dividend pay-out but there is an association between corporate board tenure and dividend payout policy. According to Jordan firms' Act, all board of directors should be at least 21 years old.

Board Nationality

"Board nationality diversity is the ratio of foreign board members to total board size" [41]. "It is the proportion of the board of directors that are non-indigenes of the company's host country. There are at least three broad merits of having a board with diverse national representation. First, with international directors on the board, a large proportion of qualified candidates would be available for the board (with broader industry experience). Second, because of their varied backgrounds, foreigners can add valuable and diverse expertise which domestic members do not possess" [42]. "Foreign board members can also help assure minority shareholders that the company is managed professionally in their best interests" (Oxelheim & Randoy, 2001). By contrast, opponents to this view opine that foreign director may be less informed about local affairs and hence less effective. Also, changing

the board language to suit foreign directors may be difficult and costly, and add to adjustments problems.

2.1.3 Financial performance

Performance is the ability of a firm to make effective use of resources at her disposal in order to achieve the desired objective. Hansen and Mowen [43] identified "two (2) types of performance, financial performance and non-financial performance". "Financial performance is defined as the outcome of how well assets of a firm are utilized to generate income" [44]. "It is a yardstick applied to measure the financial health of a firm over a given period of time. It is also described as a measure of firm policies and operations in monetary terms, the result of which could be reflected on firms return on assets (ROA), return on equity (ROE) and sales growth. The most objective way to evaluate the financial performance of a firm is the analysis of financial statement" [44].

2.2 Review of Empirical Studies

2.2.1 Board gender and dividend payout

Nguyen [45] examined "board gender diversity and corporate performance of Vietnamese firms. Using 98 firms listed on the Hanoi Stock Exchange and Ho Chi Minh City Stock Exchange from 2014 through 2019. Using quantitative analysis on unbalanced panel data, findings indicate that the more women participation helps the board of directors for gender diversity as well as the independence of the board has not yet had an impact on the financial performance of the business. However, the study documented that larger board size improves financial performance and vice versa". Bappah et al. [46] employed "a sample of nine (9) firms for a period of ten years to examine the impact of board characteristics on dividend policy of listed industrial goods firms on the floor of Nigerian stock exchange with profitability as a moderator. Results of the study documents that that profitability has a positive and significant moderating effect on the relationship between board independence, board meeting and dividend policy of listed industrial goods firms in Nigeria. However, an insignificant moderating effect was found on board size, diversity and dividend policy. They therefore, recommended that listed industrial goods firms in Nigeria should devise more credible avenues to enhance their profits for continual growth".

Karajeh [47] employed “hierarchical regression analysis to assess the moderating effect of board diversity on the relationship between financial disclosure quality and dividend quality of listed Jordanian banks. The study documents that banks with high financial disclosure quality are inclined to high-quality dividends. Furthermore, the nationality and females on the board of directors play a significant role as moderators that impact managers' motivations towards quality financial disclosure practices and bank dividends. The study concludes that the boards in Jordanian banks maintained steady dividend policies. They also tend to follow a long-term fixed strategy for paying earnings”. On the contrary, Taufik et al. [48] examine “the effect of the board of directors (BOD) diversity on dividend policy with profitability as a moderator from 2017 through 2020. Using a sample of 370 companies listed on the Indonesia Stock Exchange, the regression results indicates that board gender, education level, and nationality presents an insignificant effect in dividend payout. However, a significant negative effect was found when profitability moderates the relationship between board nationality and dividend policy. Findings may be attributed to the fact that the sample companies' board gender, education level, and nationality are homogeneous, where female directors, directors with master's education, and foreign directors have a small proportion”.

However, the study should have sampled non-banking institutions to ascertain if the steady dividend policy pattern applies. Ul Ain, Yuan, Javid, Zhao and Xiang [14] investigated “the relationship between gender diversity on the board and dividend payouts in China using a large sample over the period 2003–2017. Their results provide robust and strong evidence showing that gender diversity on the board is positively associated with cash payments of dividends. The empirical outcomes confirm that gender diversity on the board facilitates corporate governance and subsequently promotes dividend payouts. Their study demonstrates that gender diversity on the board has the greatest effect when the board has critical mass participation (three or more female directors) compared with only their token participation”. Dissanayake and Dissabandara [15] investigated “the nature and a level of the relationship between board characteristics and dividend policy. It is found that food and beverages sector had the highest percentage for dividend payout from 2015 to 2019. The

likelihood to pay dividends, women on boards indicated a significant positive relationship on dividend policy”. Nwidobie [21] investigated “the effect of board diversity on the dividend per share of listed non-financial firms in Nigeria in both the short and long-terms. Using the multivariate log-linear regression model shows that increasing the proportion males on the board of listed non-financial firms positively influences the dividend per share of these firms. Also increasing the proportion of females and minority shareholders on the boards of these firms negatively influences dividend per share both in the short and long-runs”.

Suwaidana and Khalaf [22] examined “the impact of board composition and ownership structure on the dividends pay-out policies employed by a sample of manufacturing companies listed on the Amman Stock Exchange (ASE) for the period of 2013–2015. The results of the multiple regression analysis identified the percentage of female on board to be insignificant and negatively associated with the variation in dividends per share”. Pucheta-Martinez and Bel-Oms [23] examined “the impact of gender diversity on Board of Directors (hereinafter BD) on dividend policy. Their results showed that the percentage of female directors and shares held by female directors are positively associated with dividend payout, while the percentage of institutional women directors has a negative impact. The percentage of independent and executive female directors has no effect on dividend payout. The results confirm that gender diversity has influence on dividend payout, so the existing legislation should encourage more participation by women in governing bodies”.

2.2.2 Board age and dividend pay-out

Mirza and Malik [7] evaluated “the moderating effect of diversity (gender, age, experience, nationality and education) between corporate governance and the dividend decisions and the results showed that board age have a positive and significant effect on dividend decisions”. Bill, Iftkha, John and Song (2011) “empirical tests of the relationship between corporate governance and dividend payout policy employ endogenous measures of this agency problem. Using a relatively exogenous measure that incorporates state antitakeover laws and the differences-in-differences approach, our analysis indicates that dividend payout ratios and propensities fall when managers are insulated from takeovers. The impact of antitakeover laws on dividend payouts

is more pronounced for firms with poor corporate governance and small firms”.

2.2.3 Board qualification and dividend payout

Naburi and Fredrick [49] determine “how board composition affected dividend decisions of companies listed at the Nairobi Securities Exchange. The study adopted a descriptive research design. The findings revealed at 5% level of significance, directors’ skills have statistically significant and influence on dividend decisions of listed companies”. Mirza and Malik [7] evaluated “the moderating effect of diversity (gender, age, experience, nationality and education) between corporate governance and the dividend decisions of listed companies of Pakistan stock Exchange for a period from 2010 to 2017 in addition to the effect of conventional accounting variables (Firm Size, Debt to Asset Ratio and Earning per Share) using panel data analysis. General to specific modeling was used by including all the potential regressors. The findings revealed that board experience have a significant but negative effect on dividend decisions of firms”.

2.2.4 Board nationality and dividend payout

Nharo, Moloi and Hlobo [50] investigated “the relationship between corporate governance board characteristics and dividend pay-out (e.g., dividend pay-out ratio. The results suggest that there is strong evidence in favour of the substitution hypothesis, where JSE top 40 boards with a higher degree of independence did not need to use dividends as a tool for monitoring managerial behaviour”. Byoun, Chang and Kim [20] examined “whether board diversity affect corporate dividend policy. The study found that firms with racial diversity in their boards are more likely to pay larger dividends than are firms with non-diverse boards”.

“CEO nationality has been used as a proxy for CEO’s international experience or managerial style” (Sebbas, 2017). Jalbert, Terrance, Chan, Jalbert and Landry [51] examined “the backgrounds of the highest paid Chief Executive Officers (CEOs) in the United States”. Sabbes (2017) inferred that “the nationality of CEOs and its implication are different in European setting than in an American one due to the broader cultural diversity at play in Europe. It can also be inferred that since the cultural context in Africa is different from both the American and European

setting, a study in the current setting is necessary to confirm the generalizability of the findings of previous studies”.

2.2.5 Financial performance and dividend payout ratio

Kabbani (2020) examined cross-country study which highlights the main determinants of the payout policy in the banking sector on a sample of MENA countries during the period of 2011-2016. Dividends act as a signaling tool to convey the bank’s overall stability and positive growth prospects. Large and profitable companies are more prone to distribute dividends. However, managers seek profitability and dividends distribution at the expense of high liquidity risk. Competition is the most influential determinant of dividend payout in the MENA region, in which dividends act as a control mechanism to reduce the agency costs between shareholders and managers.

Naburi and Fredrick [49] determine how board composition affected dividend decisions of companies listed at the Nairobi Securities Exchange. Collected research data was analyzed using Statistical Package for Social Scientists software. It was concluded that profitability had the greatest influence on dividend payout for firms listed at the NSE. Jaara, Alashhab and Jaara [52] investigated the determinant of dividend policy for a sample of non-financial companies in Jordan over the period 2005–2016. The results showed that return on equity has significant positive impact on dividends. This implied that firms with high profitability were paying larger consistent dividend pay-outs.

Kulathunga, Weerasinghe and Jayarathne [53]) examined the relationship between corporate governance variables and dividend policy of listed manufacturing companies at the Colombo Stock Exchange in Sri Lanka. The results of the study advocated a significant relationship between corporate governance variables and dividend policy of listed manufacturing companies in Sri Lanka. Return on assets has significant positive impact on dividend policy.

This study is underpinned by the resource dependency theory. The theory provides another view to explaining the incentives for board diversity and dividend policy. The theory was mainly developed by Pfeffer and Salancik (1978), who emphasize the influence of external actors

(e.g., local communities, government and supplies) on firms' behaviour. In particular, resource dependency theory has drawn attention to the link between corporate governance in general and different organisational environments, where firms respond to the demands of external actors who have resources (e.g., locations, infrastructures, and materials) that firms are largely dependent on in operating their activities (Pfeffer & Salancik, 1978). Similarly, since firms are dependent on external actors for obtaining resources, this reliance may result in uncertainty because external actors may withhold resources which in turn force firms to reduce the uncertainty by attempting to control the external actors (Berman *et al.*, 2005). Among strategies available to firms, the theory suggests that firms are motivated to use dividend decision as a useful strategy to provide information on corporate governance practices in order to achieve their own goals. Additionally, resource dependence theory examines how this type of firm capital, which is based on board relationships, should provide resources to the firm. Board directors can be helpful in acquiring resources from important elements outside the firm, including financial capital, political capital, or various forms of influence being held by stakeholder groups (such as customers, suppliers, and communities). According to resource dependency theory, directors serve as both providers of resources, as well as monitors of managers (agency view). Thus, in addition to their monitoring managers, directors provide expertise and resources including strategic advice and expertise, communication channels to external organisations, support from important

elements outside the firm, and legitimacy (Pfeffer & Salancik, 1978).

3. METHODOLOGY

This study adopts the correlational research design to investigate the moderating role of financial performance on the effect of board diversity on dividend payout. The study population will cover Healthcare firms listed on the Nigerian Exchange between 31st December 2011 and 31st December 2021. There are ten (10) companies listed from 2011 to 2021 on the Nigeria Exchange Group (NEG) as reported in NSE Factbook. All the ten listed firms will be used for the analysis due to the fact that they are all listed within the period of the study. Also, the number of firms makes the sample adequate for inferential statistics. Therefore, the census approach is adopted for the study.

This study employs the secondary source of data to achieve the set-out objectives highlighted in chapter one. By so doing, the problem of the study will be addressed. Data will be extracted from the Published Audited Annual Reports and Accounts of the healthcare firms from 2011-2021. The Nigerian Exchange Group Fact Book of 2021 was used as the basis for ascertaining the number of listed firms in Nigeria, the number of women directors, board age, qualification foreign directors, qualification of directors, age of directors, board size, board composition were extracted from the directors' report. Data for dividend payout ratio will be obtained from the statement of comprehensive income and statement of financial position.

Table 1. Population of the study

S/NO	Name of Companies (PLCs)	Order of Ranking
1	MAY & BAKER NIGERIA PLC	1
2	AFRIK PHARMACEUTICAL PLC	4
3	EVANS MEDICAL PLC	9
4	FIDSON HEALTHCARE PLC	3
5	MORISON PLC	10
6	GLAXOSMITHLINE NIGERIA PLC	2
7	NEIMETHINT'L PLC	6
8	PHARMA DEKO PLC	7
9	DRUGFIELD PLC	8
10	BCN PLC	5

Source: Generated from the Nigerian Exchange Group (NGX) Fact Book, (2021)

3.1 Variable Measurement and Model Specification

Table 2. Explanatory variables

Variable	Nature of Variable	Proxy (ies)	Measurement
Dividend Payout Ratio	Dependent	DIVpay	Dividend declared divided by number of ordinary shares in issue
Board Dynamism	Independent	Board Gender	Number of women on board of directors over the total number of board members [54].
„	“	Board Nationality	Number of foreign directors divided by the total number of board members [40] (Zhang & Uchida, 2011, Abdul Rauf, Johari, Buniamin, & Abd Rahman, 2012).
„	“	Board Age	The Average age of director sitting on board for a particular year (Total Age of directors divided by the number of directors for a particular year)
„	“	Board Qualification	Average qualification of directors in a particular year (Weight is assign to each degrees, 3 for PhD, 2 for Masters and 1 for B.Sc and others) [40].
Financial Performance	Moderator	Return on Assets	Profit after tax divided by total assets

Source: Author, 2023

The following equation forms the model of the study using balanced panel multiple regression. The equation is represented as given below:

$$\text{DivPay}_{it} = \beta_{0it} + \beta_1 \text{Bgen}_{it} + \beta_2 \text{Bnat}_{it} + \beta_3 \text{Bage}_{it} + \beta_4 \text{Bqua}_{it} + \beta_5 \text{Fper}_{it} + \mu_{it} \text{ Model (i)}$$

$$\text{DivPay}_{it} = \beta_{0it} + \beta_1 \text{Bgen}_{it} + \beta_2 \text{Bnat}_{it} + \beta_3 \text{Bagen}_{it} + \beta_4 \text{Bqua}_{it} + \beta_5 \text{Fper}_{it} + \beta_6 \text{Bgen}_{it} * \text{Fper} + \mu_{it} \text{ Model (ii)}$$

Where:

- DivPay = Dividend Payout Ratio
- Bgen = Board Gender
- Bnat = Board Nationality
- Bage = Board Age
- Bqua = Board Qualification
- Fper = Financial Performance (Moderator Variable)
- $\beta_1, - \beta_8$ = Coefficient of explanatory variables
- β_0 = Constant or Intercept
- μ = Error Term
- it = Firm and Time

Robustness tests such as multicollinearity test, normality test, heteroscedasticity test, normality test of error term and Hausman specification test were be conducted to ensure the validity of the results.

4. RESULTS AND DISCUSSION

The presentation of results follows the sequence; descriptive statistics including normality test, Pearson correlation matrix, regression results, and post-estimation tests. The descriptive statistics provides the basic understanding with respect to the nature of the data. Correlation matrix is relevant because it shows the relationship among all the study variables in order to ascertain the adequacy of the models for testing the hypotheses. The regression analysis is used to test the study hypotheses. The validity of the models is tested using the post-estimation tests including multicollinearity test and heteroskedasticity test.

4.1 Descriptive Statistics

Table 3 shows that dividend payout (DPO), the average is 0.097 of total assets, and the standard deviation is 0.149. The high standard deviation indicates the data for the variable is widely dispersed from the mean, which means that there is a wide disparity in the extent of dividend payment among the sample companies. The highest dividend payout for the period is approximately 0.682 of total assets. The mean of gender diversity, which is the number of female directors sitting on boards of the healthcare firms

is 15% of the board size, which is a slightly disappointing figure because of the increasing agitation for more female representation of corporate boards, especially in the developed countries. The standard deviation of 0.122 shows that there is less dispersion of the data from the mean. The minimum and maximum of 0 and 0.457. Board qualification has a mean of 0.665 and a standard deviation of 0.120, while the mean and maximum are 0.375 and 0.890, respectively. The high average indicates that most of the companies have directors that are highly qualified. The directors that are at the lower cadre of qualification are 37.5% and those that are most qualified are 87%. The average board age is approximately 50 years. The youngest director is 36 years old while the oldest is 68. These figures indicate that the boards of healthcare companies have a mix of both young and old directors. The ratio of foreign directors to board size, which is the proxy for board nationality has an average of 0.153 and a standard deviation of 0.088 indicating that there are few foreigners as directors on the boards of Nigerian healthcare firms. This ratio is not surprising because of the declining levels of foreign direct investments in the various sectors of the economy. Some firms in the sample have zero foreign directors, while the maximum foreign representation is 0.612. Thus, there is less nationality diversity on the boards of the healthcare firms. Financial performance has an average of 2.006, indicating that the companies made a profit of about 2% of the total assets during the period under review. The minimum of -

8.129, suggesting that some firms have made loss of about 8% of their total assets. Overall, the results indicate that healthcare companies performed fairly well during the study period.

Lastly, firm size which is the natural logarithm of total assets averages 7.267 with a standard deviation of 0.823. The low standard deviation implies less dispersion of the data across the mean and that there is not much difference in the total assets of the firms. The minimum and maximum firm size is 6.008 and 9.862 respectively. The statistics show that the data consists of firms that are very large in the capital base and those that are small, which is relevant in testing how differences in size influence dividend payout.

4.2 Normality Test

The study employs an advanced test for normality of data using the Shapiro-Wilk test. Table 4 presents the results.

The Shapiro-Wilk test presented in Table 4 confirms that the data for all the study variables except for board age are not normally distributed based on their adjusted chi-square and joint probabilities, which are less than 0.05. The regression analysis emphasized the need for normality of residual and not of the data. It is also worth mentioning that care was taken to ensure that extreme outliers did not cause the non-normality of the data.

Table 3. Descriptive statistics

Variable	DPO	BG	BQ	BAGE	BN	ROA	FSZ
Mean	0.097	0.149	0.665	48.939	0.153	2.006	7.267
Std. Dev.	0.102	0.122	0.120	9.464	0.123	3.634	0.823
Minimum	0.001	0.000	0.375	36	0.002	-8.129	6.008
Maximum	0.682	0.457	0.890	68	0.612	23.508	9.862
Observations	99	99	99	99	99	98	99

Source: Computed by the Author using Stata 13

Table 4. Normality test

Variable	Z	Probability
DPO	6.710	0.000
BG	4.201	0.000
BQ	6.742	0.000
BAGE	-6.858	1.000
BN	5.744	0.000
ROA	7.548	0.000
BG*ROA	7.377	0.000
FSZ	2.835	0.000

Source: Computed by the Author using Stata 13

4.3 Correlation Analysis

Table 5 is the Pearson correlation matrix that shows the correlation among all pairs of variables.

Gender diversity has a negative correlation with dividend payout with a correlation value of -0.231. Board qualification, board age and board nationality have positive associations with dividend payout with correlation values of 0.194, 0.167 and 0.296, respectively. Financial performance (0.249), and the interaction of financial performance and gender diversity (0.351) also have positive relationships with dividend payout. However, firm size has a negative correlation with dividend payout (-0.213).

Board gender diversity has a negative correlation with all other board diversity variables but has a positive relationship with board qualification. Board qualification has positive correlations with all the independent variables, but a negative association with board nationality. The moderating variables has a positive relationship with all variables, except board nationality. Also, firm size (LNTA) has a positive and strong correlation with dividend payout.

4.4 Diagnostic Tests

The study conducts two post-estimation tests namely multicollinearity and heteroskedasticity tests.

From Table 6, the Variance Inflation Factor (VIF) and Tolerance Value (TV) are within the acceptable limit of less than 10.00 and above 0.10 respectively according to Gujarati (2003). The test confirms the earlier results obtained in the Pearson correlation matrix in Table 6, which shows correlation coefficients of less than 0.80.

In addition, the heteroskedasticity test of the model reveals chi2 of 86.99 and probability of 0.000. This means that the homoscedasticity assumption is violated and therefore, the ordinary least squares regression is not appropriate. To solve this problem, the study employs regression with robust standard errors.

4.5 Regression Analysis

Because of the panel nature of the data, the study conducted the fixed and random effect regression. The Hausman specification favoured the random effect regression. In addition, the Lagrangian multiplier test suggested absence of panel effect in the data. Consequently, we employed the OLS regression with robust standard errors to test the hypotheses. The section presents two sets of regression; the first one tests the direct relationship between board diversity and dividend payout; the second test the moderating effect of financial performance on the relationship between board diversity and dividend payout. The results are presented in Table 6 and Table 7 respectively.

Table 5. Correlation analysis

Variable	DPO	BG	BQ	BAGE	BN	ROA	BG*ROA	FSZ
DPO	1.000							
BG	-0.231	1.000						
BQ	0.194	0.278	1.000					
BAGE	0.167	-0.182	0.465	1.000				
BN	0.296	-0.099	-0.171	-0.221	1.000			
ROA	0.249	-0.106	0.012	0.052	0.050	1.000		
BG*ROA	0.351	0.170	0.131	-0.044	0.070	0.711	1.000	
FSZ	-0.213	0.221	-0.032	-0.079	0.081	-0.065	0.062	1.000

Source: Computed by the Author using Stata 13

Table 6. Multicollinearity tests

Variable	VIF	1/VIF
BG	1.44	0.692
BQ	1.59	0.627
BAGE	1.55	0.643
BN	1.09	0.914
BG*ROA	2.39	0.418
FSZ	1.08	0.923
Mean	1.64	

Source: Computed by the Author using Stata 13

Table 7. Regression analysis without moderation

Variable	Coefficient	Std. Error	t. Value	Probability
Constant	0.076	0.091	0.84	0.406
BG	-0.198	0.080	-2.40	0.018
BQ	0.098	0.072	1.36	0.176
BAGE	0.003	0.001	2.59	0.011
BN	0.268	0.110	2.44	0.017
ROA	0.004	0.003	0.79	0.434
FSZ	-0.029	0.010	-2.87	0.005
R-Square		0.2735		
F. Stat		3.10		
Probability		0.0083		

Source: Computed by the Author using Stata 13

The OLS regression without the moderation effect shows R-squared 0.2735 reveals a high combined effect of board diversity on the dividend payout of healthcare firms. The F. value of 3.10 with a probability of 0.0083, which is significant at 5% indicates that the model is well fitted. The result means that board diversity plays a significant direct effect on the dividend payout of healthcare firms.

Concerning the individual variables, gender diversity has a coefficient of -0.198, t. value of -2.40 and probability of 0.018. These show that gender diversity has a significant negative effect on dividend payout. Board qualification has a coefficient of 0.098, t. value of 1.36 and probability of 0.176. This indicates that board qualification has an insignificant positive effect on dividend payout. Board age has a coefficient of 0.003, t. value of 2.59 and probability of 0.011.

The result suggest that board age has a significant positive effect on dividend payout. In addition, board nationality has a negative coefficient of 0.268, t. value of 2.44 and probability of 0.017, indicating that nationality

diversity has a significant positive effect on dividend payout. The coefficient for financial performance is 0.0074, t. value of 0.79, and probability of 0.434, indicating that financial performance has an insignificant positive effect on dividend payout. Firm size has a coefficient of -0.029, a t. value of -2.87, and a probability of 0.05, suggesting that firm size has a significant negative effect on dividend payout.

Table 8 shows the moderation effect of financial performance on the relationship between board diversity and dividend payout of healthcare firms in Nigeria.

Table 8 contains regression model that included the test of the moderating role of financial performance on the relationship between board diversity and dividend payout. The R-squared is 0.3912, which is a significant improvement from the model that tests the direct relationship in Table 7. These indicate that there is significant moderation effect of financial performance on the relationship between board diversity and dividend payout of healthcare firms in Nigeria.

Table 8. OLS regression result

Variable	Coefficient	Std. Error	t. Value	Probability
Constant	0.206	0.079	2.61	0.010
BG	-0.252	0.086	-2.92	0.004
BQ	0.077	0.040	1.95	0.053
BAGE	0.019	0.020	0.93	0.354
BN	0.246	0.119	2.08	0.040
ROA	-0.005	0.007	-0.58	0.565
BG*ROA	0.061	0.030	2.03	0.045
FSZ	-0.025	0.010	-2.50	0.014
R-squared	0.3912			
F. Stat	3.37			
Probability	0.000			

Source: Computed by the Author using Stata 13

In terms of the independent variables, gender diversity has a coefficient of -0.252, t. value of -2.92 and probability of 0.004. These show that gender diversity has a significant negative effect on the dividend payout. Based on this the study rejects hypothesis 1, which states that gender diversity has an insignificant effect on dividend payout. Board qualification has a negative coefficient of 0.077, t. value of 1.95 and probability of 0.053 indicating that board qualification has a significant positive effect on dividend payout. The study, therefore, rejects the null hypothesis 2, which suggested an insignificant effect of board qualification on financial performance.

Board age has a coefficient of 0.019 with t. value of 0.93 and probability of 0.354, suggesting board age has an insignificant positive effect on dividend payout. The study, therefore, fails to reject the null hypothesis 3, which states that board age has an insignificant effect on dividend payout. Board nationality diversity has a coefficient of 0.246, t. value of 2.08 and probability of 0.040, indicating that board nationality has a significant positive effect on the dividend payout. Based on this the study rejects hypothesis 4, which states that board nationality has an insignificant effect on dividend payout.

The coefficient for financial performance is -0.005, t. value of -0.58 and probability of 0.564 implying that financial performance has an insignificant negative effect on dividend payout. However, the interaction of financial performance and gender diversity has a coefficient of 0.061, t. value of 2.03, and probability of 0.045. This shows that financial performance has a positive moderating effect on the relationship between gender diversity and dividend payout of healthcare firms in Nigeria. Therefore, the study rejects the null hypothesis 5, which suggests that financial performance has an insignificant moderating effect on the relationship between board dynamism and dividend payout. The direction of the relationship between gender diversity and the dividend payout changes from negative without moderation to positive after the moderation. Firm size (LNTA) has a coefficient of -0.025, t. value of -2.50 and probability of 0.014. This means that firms' total assets have a negative and significant effect on the dividend payout of healthcare firms in Nigeria.

5. DISCUSSION OF FINDINGS

Based on the test of hypotheses the study finds that gender diversity has a significant negative

effect on the dividend payout of healthcare firms in Nigeria. The results support the empirical evidence of Nguyen et al. (2017), Sameer [9] and El-Marghi et al. (2017) who found either negative or insignificant effect of gender diversity on dividend payout. However, the finding contradicts the empirical results of Chen et al. [19], Rahahleh (2017), Al-Amarneh et al. (2017) and Benjamin and Otisa (2017) who found positive effect of gender diversity on dividend payout of firms in various countries including U.K., U.S. Jordan, India, China and Kenya. The results are also in contrast with resource dependency theory which views female directors as an important resource that can add to board effectiveness. However, gender diversity when moderated with financial performance presents a positive effect which aligns with the resource dependence theory. Findings coincides with Karajeh [47] and contradicts with Bappah et al. [46].

The result of the effect of board qualification on dividend payout is positive and significant meaning that boards that are diverse in terms of educational background positively influence dividend payout. The result is consistent with the empirical studies of LaPorta et al. [55] and Guner et al. [56]. It, however, counters the findings of Sarwar et al. [57], Benjamin and Kosgei (2018) and Qio et al. (2018) who reported a negative relationship between board qualification and dividend payout. The finding is in line with the theoretical explanation of Watts (2003) that firms whose board comprised of directors with more diverse expertise have the tendency to give better advice as regards the optimum dividend payout given the firm's prevailing economic situation.

Concerning board age, the study found an insignificant positive effect on dividend payout. The result conforms to the findings of Knyazeva et al. [58], Byoun et al. (2010), Benjamin (2013), Byoun et al. [20] and Al-dhamari et al. (2016) who documented the insignificant influence of age diversity on dividend payout. However, it is inconsistent with the studies of Bolbol (2012) and Subramaniam et al. (2014) who reported a negative effect of board age on dividend payout. The result does not support the resource dependency theory, which views differences in age composition of the board as a valuable resource that the firm can leverage on to discipline managers and improve corporate performance [59,60]. The result on nationality diversity is in line with the hypothesis that board nationality has no significant effect on dividend

payout of listed healthcare firms in Nigeria. This finding is in line with the previous results of Setiawan (2018) who showed that boards comprising of high foreign directors significantly affect dividend payout. The result is also consistent with other studies including Oliviera et al. (2016) and Pucheta-Martinez and Bel-Oms (2015). Theoretically, the result seems to suggest that foreign directors are interested in the dividend payout of the companies they invest, and they also pay more attention to performance and capital appreciation. This finding may also support the view that foreign members are still treated as valuable inputs to board activities rather than tokens of nationality diversity.

In terms of the moderating effect of financial performance on gender diversity and dividend payout, the study finds a significant positive effect. The results suggest that firms with diverse boards pay significantly higher dividends when they earn higher profits. This implies that the ability of female directors to influence dividend payout is condition upon the profitability of firms. The result seems to partly support the findings of Byoun et al. [20] who found a significant positive moderating effect of free cash flows on the relationship between gender diversity and dividend payout. Overall, the result concerning the moderation effect supports the earlier claim that board diversity effect on dividend payout is affected by the level of financial performance. The finding also supports the agency theory that the board's decisions regarding dividend payout and other corporate outcomes are affected by the extent of profitability. For the direct relationship, the findings are in line with the resource dependency theory that corporate results are determined by the organizational resources of which the board of directors is a critical component [61,62].

The findings of this study provide several theoretical and practical implications. Theoretically, the result for gender diversity, board qualification and nationality diversity support the resource dependency theory. The theory holds that in addition to their monitoring managers, directors provide expertise and resources including strategic advice and expertise, communication channels to external organizations, support from important elements outside the firm, and legitimacy. All these have a bearing on corporate outcomes such as dividend payout, performance, and financial reporting. Practically, the study demonstrates that board

diversity variables can be leveraged on by Nigerian healthcare firms to align the interest of managers and shareholders concerning dividend payout. The findings lend support to the increasing agitation globally for more diverse boards to protect the interest of numerous corporate stakeholders especially the investors. Specifically, the result supports board diversity across gender, educational qualification, and nationality diversity is relevant to the dividend payout, especially where there are higher financial performance [63-66]. The findings also support the code of corporate governance recommendation for board diversity to improve organizational outcomes [67-69].

6. CONCLUSIONS

This study examines the moderating effect of financial performance on the relationship between board diversity and dividend payout of listed healthcare firms in Nigeria. Based on the findings, the study arrives at the following conclusions. Firstly, financial performance when moderated with gender diversity has a significant positive effect on dividend payout of listed healthcare firms. The firms with boards that have more presence of female directors are likely to perform better and have higher tendency to pay higher dividends than firms that are not diverse along gender lines. Secondly, board qualification of the boards of the Nigerian healthcare firms leads to an increase in dividend policies (dividend payout), hence a decrease in the agency conflict in the healthcare firms. This is because the non-payment of dividend has been argued to be one of the areas of potential conflict between managers and shareholders. Thirdly, the results indicate that board nationality has a significant positive effect on dividend payout of listed healthcare firms in Nigeria. This finding means that foreign directors pay attention to the dividend payout of companies and help increase the dividend payout of the firms. Based on these conclusions, the study recommends that there should be a policy decision of Nigerian healthcare firms that will provide female directors who have better corporate experience a quota on the board of directors. Their wealth of experience will help lead to goal alignment between shareholders and managers by increasing dividend payment and reducing the cash holding by managers. This can be achieved through a recommendation in future codes of corporate governance. The boards of the companies should be composed of more individuals with financial expertise to help in achieving an optimal

dividend policy. Investors should ensure that high performance should correspond to dividend payout. This can be achieved by constant monitoring of the levels of financial performance.

COMPETING INTERESTS

Authors have declared that they have no known competing financial interests or non-financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/100996>