Board Multiplicity and Cash Flow Performance of Listed Health Care Firms in Nigeria

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ABSTRACT

This study was carried out to examine the relationship between board multiplicity and cash flow performance of health care firms in Nigeria. In order to determine the relationship between board multiplicity and cash flow performance, board multiplicity was proxy using board gender multiplicity, board nationality multiplicity and board ethnicity multiplicity while cash flow performance on the other hand was proxy by operating cash flow measured as operating cash flow to total assets. The study adopted Ex Post Facto Design and data were collected from the annual reports and accounts of the listed health care firms in Nigeria for the period ended 2016-2020. OLS model was used in the data analysis and the findings of the study indicate that there is a significant and positive relationship between board gender multiplicity, board nationality multiplicity, board ethnicity multiplicity and operating cash flow performance of health care firms in Nigeria at 1%-5% significant level. Thus, the study concludes that board multiplicity ensures cash flow performance in Nigeria. In lieu of this, the study recommended that firms should increase the number of female directors in the board composition and also consider ethnic composition of board of directors which should be integrated into the corporate governance practices as allowing for a more ethnic balance translates into better financial performance. A balanced approach towards the hiring of foreign directors by listed health care firms in Nigeria is also recommended as with this development, cash flow performance would constantly be maintained.

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KEYWORDS: Board Gender Multiplicity, Board Nationality Multiplicity, Board Ethnicity Multiplicity, Cash Flow Performance

1. INTRODUCTION

In recent years, matters surrounding board of director leadership and oversight roles have taken on increased significance to investors so much that today's economic challenges highlight the importance that board heterogeneity plays in enhancing value and providing companies with a full range of fresh talents and experience. These challenges have been perceived overtime and have become a matter of concern after the collapse of many big multinational companies around the world arising from various board scandals. The collapse of these multinational companies has raised concern over the activities of the board of directors and this has brought about looking out for other governance mechanisms one of which is board multiplicity. Many practitioners have clamored for this board multiplicity with the

argument that it can mitigate the effect of homogeneous board such as groupthink which is a phenomenon in which members' effort to achieve consensus override their ability to realistically appraise alternative courses of actions (Rhode & Packel, 2010).

Board multiplicity has taken a significant place in the field of corporate governance today. This is because board diversity is viewed as an apparatus for a solid inward control framework as it expands proficient and powerful dynamic exercises of the board of directors in the corporate organization (Campbell & Minguez, 2010).

As the leadership of an organization rest on the board of directors, any form of inefficiency and

ineffectiveness in their operations and activities affect the organization and its stakeholders such as employee, shareholders, managers and customers and even the nation of residence (Owolabi, Bamisye, Efuntade & Efuntade, 2021). According to Daniel, Aza and Pam (2020), board multiplicity can be a substitute for board heterogeneity and other governance mechanisms as differences among members on the board can improve the quality of board decisions but only if the board members themselves take the advantage of the reward of heterogeneity rather than window-dressing the concept of heterogeneity on the board

It is a matter of concern as there are very few empirical analyses on this aspect of board multiplicity in Nigeria as most studies have been on board independence, CEO duality, board remuneration and board gender but rarely board multiplicity. For instance, Ilaboya and Obaretin (2015); Abdullah (2016); Brown (2016); Lau and Tong (2018); Darmadi (2010), Dezso and Ross (2012); Nwaobia, Kwarbai, and Ogundajo (2016) etc examined the relationship between board characteristics (directors remuneration, board diligence, board independence, female directorship & CEO share ownership) and firms performance. Also, most studies conducted to that effect measured performance of the firms using different measures like ROA, ROE, EPS, EVA, ROCE & so on.

On the same note, Owolabi et al (2021), Ujunwa, Okoyeuzu, and Nwakoby (2012) and Omoye and Eriki (2013) examined the ethnicity of board of directors of selected firms, but their result remains inconclusive as some variables failed to test at any significant level. The contradictory empirical evidence indicates the inconclusiveness of result, demanding more investigation

Also Daniel, Aza and Pam (2020) concentrated on the board of directors' heterogeneity with reference to listed deposit money banks in Nigeria and many other studies, none had concentrated on the Health Care Sector of Nigerian Exchange Group (NGX) based on available literature. Hence, the need for the study to investigate on the relationship between board multiplicity and cash flow performance using firms quoted under health care sector of Nigerian Exchange Group.

To achieve this purpose, the following hypotheses were formulated:

H₀₁: Board Gender Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

H₀₂: Board Nationality Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

H₀₃: Board Ethnicity Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

2. Review of Related Literature

2.1. Board Multiplicity

Kiefer (2005) explained the concept of heterogeneity by arguing that homogeneity and heterogeneity refers to the extremes of the diversity scale. They are used as anchoring points, meaning less heterogeneous or more heterogeneous and less homogenous or more homogenous. They refer homogeneity as a diversity score equal to zero. This zero refers to the complete absence of dissimilarities between the individual board members. Heterogeneity refers to the complete dissimilarities between individual board members with regards to the included dimensions (Daniel et al, 2020). For the purpose of this study, Board Gender Multiplicity, Board Nationality Multiplicity and Board Ethnicity Multiplicity were used as a measurement for Board Multiplicity.

2.1.1. Board Gender Multiplicity

Board gender multiplicity can be said to be those varied personal characteristics and differences in people who are members of the board that make the board heterogeneous, and more effective in proffering wider range of solutions. Board gender multiplicity is a component of board multiplicity. It refers to the variation in the number of women on the board of corporate firms. It is worthy to note that women play an important role in compliance with legal aspects and corporate performance (Kastlunger, Dressler, Kirchler, Mittone & Voracek, 2010). As cited in Imade (2019), Higgs Derek Report (2003) reported in the United States argues that board gender multiplicity could improve the effectiveness of the board as well as performance, depending on the masculine and feminine traits. The report thus recommends that companies can benefit from the existence of professional women in their boards

2.1.2. Board Nationality Multiplicity

In analyzing the linkage between foreign directors and the affairs of the organization that they govern suggests that foreign directors, depending on their cultural distance from the country in which a firm is headquartered, can introduce different values, ways of cognition, and personality features to the board, and domestic internationally experienced managers and directors can contribute to the knowledge of such foreign values, cognition models, and typical personality profiles (Daniel et al, 2020). The study

also found that board nationality negatively related to performance and statistically significant at 5% level in determining the profitability of listed deposit money banks in Nigeria which is consistent with our a priori expectation.

2.1.3. Board Ethnicity Multiplicity

According to Malesevic (2004) ethnicity, its existence or degree of force is not realized in the possession and perpetuation of distinct cultural characteristics by a particular group. Ethnic identity and difference is created and becomes culturally and politically meaningful in terms of how it inter-relates to other groups and to broader social, political and economic processes. Ethnic boundaries, for both sociology and anthropology, tend to be the outcome of social action.

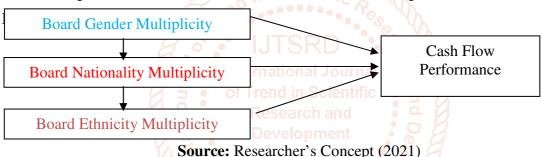
Daniel et al (2020) found that board ethnicity significantly and positively impact banks performance in Nigeria. Their findings suggest that increased ethnic diversity on boards of directors

would lead to higher firm financial performance and that board ethnic diversity was proven to be an effective tool that should be imposed on boards of directors for a greater performance.

2.1.4. Cash Flow Performance

Cash flow performance is the planning, organizing, and controlling of cash inflows and outflows in an entity during a particular period. Cash flow is the total value of the money that is actually received by or paid out by an entity for over a certain time period (Albrecht, 2003). Uremadu (2004) described cash flows of an entity as those pool of funds that the firm commits to its non-current assets, inventories, account receivables and marketable securities" that generates profit. The ability of the company to efficiently and effectively choose adequate sources of funds to finance its activities will differentiate a strong cash flow management and poorly managed cash flows





2.2. Theoretical Framework

The theoretical framework which gives the meaning of a word in terms of the theory on board multiplicity and cash flow performance established in this study is Resource Dependence Theory work depends upon.

2.2.1. Resource Dependence Theory (RBT).

The resource-dependence theory was propounded by Pfeffer and Gerald in the year 1970. The resourcedependence approach is concerned with how organizational behavior is affected by external resources the organization utilizes. A fundamental assumption of Resource Dependence Theory laid by Nienhuser (2008) is that dependence on "critical" and important resources influences the actions of organizations and those organizational decisions and actions can be explained depending on the particular dependency situation. Hermalin and Weisbach (2001) on the same note argue in favour of resource dependency theorists stating that skills, gender experience, expertise, nationality and ethnicity of board members form the important resources to guide and help firm performance. The resource dependency theory is the underpinning theory for this research

since it provides a theoretical basis to explain this association between board multiplicity and firm financial performance, since the theory states that 'board members with different skills, different cultural backgrounds, different gender, among others, will act as a strategic resource to the firm which may result to superior performance (Ujunwa, Okoyeuzu & Nwakobi, 2012).

2.3. Empirical Review

Onyali and Okereke (2018) examined the effect of board heterogeneity on performance of firms in Nigeria. Specifically, the study examined the effect of board size, women on board and board independence on return on assets of listed manufacturing firms on Nigeria Stock Exchange. The study adopted Ex-post facto research design. Population of the study is made up of seventy-six manufacturing firms listed on the Nigeria Stock Exchange as at the year, 2016 while thirty-two firms was used as sample of the study. The secondary data used in the study were sourced from the publications of Nigeria Stock Exchange and annual reports of the sampled firms. Multiple regression analysis with the aid of E-view 9.0

statistical software was used for data analysis. Findings of the study revealed that board size, women on board and board independence have significant and positive effect on return on assets of manufacturing firms listed on Nigerian Stock Exchange. Based on this, the study recommended among others that firms should endeavor to diversify their board for improved groupthink and board effectiveness.

Bukar, Musa and Ahmed (2020) analyzed the impact of gender diversity on the financial performance of Nigerian store cash banks. In particular, the review investigated the impact of women on pigs. The presence of a female CEO on the female onboard rate and the return of resources and the return of value. This review used information from 16 banks between 2011 and 2015. The review used various recurrences to analyze the information. Later, at that point, it was stated that gender diversity had decisive constructive consequences for ROA and did not affect ROE. Although there are cautions against approaches aimed at expanding or empowering women in such situations in agricultural countries such as Nigeria, we have proposed increasing the number of women on board the director.

Ilogho (2017), examine the effect of board nationality and ethnic diversity on firms performance in the Nigeria stock exchange. With the aim of investigating the level of influence ethnic diversity and board nationality would affect firm performance in terms of profitability and growth in a developing economy, the study used of ROA, ROE and Tobin's Q for financial measures. The study analysed date from 60 nonfinancial firms with periodic observations from 2012-2015 using the ordinary least squares regression method. Yemeni formula was used to calculate the sample size out of the remainder 119 listed nonfinancial after 57 listed firms from the financial sector were removed. The total sample size was further streamlined to 60 based on a common reporting period (January 1st to December 31st) to ensure consistency. The Findings indicate that ethnic diversity and board nationality has no significant influence on the performance level of firms in both profitability (ROA and ROE) and growth (Tobin's Q). Findings also reveal that the average board size of the listed non financial firms in Nigeria meets the countries corporate governance requirement of nine (9) members and the average board has a combination of at least two of the three ethnic groups in Nigeria. The board composition of sampled firms still reveals the presence of family members in same board which is against the central board composition code of corporate governance. This study encourages a diverse board since there is no significant effect on financial based performance; it is still advisable to be diverse except cost outweighs benefits. Diversity always tends to have effects on the way the board members make a decision, or strategic moves. It sets a control, brings innovation and could also slow down the rate of decision making.

Okoye, Olokoyo, Okoh, Ezeji and Uzohue (2020), examined the nexus between corporate governance practices and bank profitability in Nigeria. It adopts the size of bank board and directors' stake as proxies for corporate governance, with return on assets and return on equity as representations for financial performance. The research incorporates firm size as a controlled variable. The estimation technique of the Generalized Method of Moments was employed. Evidence from the research reveals that board size, directors' equity, and firm size substantially affect Nigerian banks' financial performance. Besides, the study shows a robust effect of lagged return on equity on the current level of performance. Therefore, the study concludes that governance in business entities strongly affects their financial performance and recommends maintaining optimum board size to minimize boardroom conflicts. It further recommends that the requirement for substantial equity stake by directors of banking institutions be sustained, as it secures commitment to governance practices that support profitability.

Iyafekhe and Ohiokha (2017), examine corporate board diversity and financial performance of Nigerian Banks. The study employed a panel research design; annual data were sourced from banks quoted in the Nigerian Stock Exchange (NSE) as at 2015 and were analyzed using Ordinary Least Square (OLS) statistical technique. The result from the study revealed that gender composition and foreign nationality exhibits significant impact on financial performance of banks in Nigeria, though the strength of their impact differs. However, independent directors and board ethnic diversity had insignificant impact on financial performance of banks in Nigeria. The study envisaged that a high sex composition in favors of women, foreign directors and ethnic diversity in favors of southerners in the board of Nigerian banks will significantly improve their overall financial performance. This research therefore recommends that foreign nationalities in the board of Nigerian banks should be increased because it enhances their financial performance by increasing accessibility to technology, information sharing and reducing inefficiencies in management; it is also recommended that ethnic diversity be given serious consideration if the goal of maximizing corporate

financial performance is to be achieved in Nigerian banks.

Endraswati (2018) examined the influence of the proportion of women as directors, tenure of women as directors, education level of women as directors, and the education background of women as directors on the performance of sharia banking in Indonesia. The sample used in the research was 11 sharia banks in the period of 2011-2015. The research used multiple regression analysis technique. The results showed that the proportion of women as directors has a negative effect on the performance of sharia banking in Indonesia. Other variables such as tenure of women, women's education background and firm size have a positive effect on sharia banking performance. Only the women's education level as a director does not affect the performance of sharia banks in Indonesia.

Osemwegie and Ugbogbo (2019) examine the impact of board compensation and diversity on the financial performance of Nigerian citation banks. In particular, this review evaluated selected listed banks in Nigeria and then investigated the gender of the board, the identity of the board, the ethnicity of the board, and the impact of the creation of a board on profits. This review used 15 quoted banks on the Nigerian Stock Exchange that were ordered between 2009 and 2017. This review used fascinating insights, Pearson relationship studies, variable iteration tests, and recurrence studies to analyze the information. Then, at that point, board remuneration, board gender diversity, board ethnic diversity, and board arrangements have very beneficial consequences for financial performance, while board identity. It was that diversity is hurting financial performance. Therefore, board individuals should be fully compensated, as studies can play an important role in reducing irreconcilable situations between board individuals and bank investors.

Trinh, Pham, Pham and Nguyen (2018) examined the effects of female leadership, at both board-level and individual-level, on the corporate value of UK FTSE100 stocks. Using the Generalized Method Moments (GMM) regression approach with a dataset of 96 publicly firms from 2006 to 2016; the analysis revealed strong evidence that the existence of female directors on board is positively associated with firm value. The relationship between the female chairman and firm value is significantly positive whilst there exists an adverse link between female CEO and firm value. The findings implied a significant effect of quota laws for gender diversity of boards of directors and female directors' positions on UK corporate market value.

Adetula, Folashade, Egbide and Adeyemo (2019) investigated the economic impact of gender diversity on board composition of companies listed on the Nigerian Stock Exchange (NSE). Based on the grouping of fifty most capitalized companies on the NSE into companies with no female on board and those with at least one female on the board, the firm performance was analyzed with Mann Whitney U test over a three-year period. They also examined whether there was any significant difference between the performance of boards with only one female and those with more than one female. The results showed no significant difference in the performance of both groups. This was due to moderately heterogeneous board composition as a result of few females in top level decision-making. The study recommended a policy mandating listed companies to evaluate their employment and selection methods regarding nomination and promotion into boards and management teams.

3. Methodology

This study adopts Ex-Post Facto Design. This was adopted based on the fact that our data is secondary data that exists already which cannot be manipulated or controlled. The population of the study consists of the entire 8 firms quoted under Health Care Sector of Nigerian Exchange Group (NGX) as at 2021 business list covering from 2016-2020. The use of quoted Health Care Firms on NSE could be justified based on the fact that there is no known study which had concentered on board multiplicity and cash flow performance with reference to Health Care Sector of NSE to the best of our knowledge. Based on this, a total of 8 firms formed our sample size with 40 observations. The data were obtained from the Annual Reports and Accounts of the sampled firms. OLS Model was employed to examine the relationship between board multiplicity (BGM, BEM & BDM) and cash flow performance (operating cash flow to total assets).

The collected data were analyzed with the aid of STATA 15. Variance Inflation Factor (VIF) was explored in order to determine if there is a multicolinearity existence or auto correlation of the regressors.

3.1. Operationalization and Measurement of Variables

3.1.1. Dependent and Independent Variable

The dependent variable used in the study cash flow performance and was proxy using operating cash flow to total assets. The Independent variable was captured using Board Gender Multiplicity (BGM), Board Nationality Multiplicity (BNM) and Board Ethnicity Multiplicity (BEM) as shown on Table 1 below:

Table 1: Measurement for Independent Variable

| Variable | Measurement | A Priori Expectaions |
|-------------------|--|-------------------------|
| Dependent | | |
| Cash Flow | Operating Cash Flow to Total Assets | Ndubuisi et |
| Performance | Operating Cash Flow to Total Assets | al (2021) |
| Independent | | |
| Board Gender | Proportion of women in management to total number of board | Daniel et al |
| Multiplicity | Proportion of women in management to total number of board | (2020) |
| Board Nationality | Ratio of foreign directors to board size | Daniel et al |
| Multiplicity | Rand of foreign directors to board size | (2020) |
| Board Ethnicity | Dummy (1, 0): Board ethnic diversity takes a value of '1' if more | Chuah and |
| Multiplicity | than one ethnic group present as the firm's directors or '0' otherwise | Hooy (2018). |

Source: Empirical Survey (2021).

3.2. Model Specification and Justification

The study adapted and modified the model of Daniel, Aza and Pam (2020) in examining the relationship between board multiplicity and cash flow performance as shown below;

Daniel, Aza and Pam (2020): ROE = β 0 + β 1BN+ β 2BG+ β 3BE + β 4BS +e

The modified model for the study is shown as thus

$$OCF_t = \beta_0 + \beta_1 BGM_t + \beta_2 BNM_t + \beta_3 BEM_t + \mu$$

Where:

OCF = Operating Cash Flow

BGM = Board Gender Multiplicity

BNM = Board Nationality Multiplicity

BEM = Board Ethnicity Multiplicity

 μ = error term

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4. Data Analysis and Results

Table 2: Descriptive Statistics

| | BGM | BNM | BEM | OCF |
|--------------|----------|----------|----------|----------|
| Mean | 3.365 | 2.6725 | 2.108 | 1.956 |
| Std. Dev. | .6757902 | .6488599 | .5365569 | .4566141 |
| Maximum | 4.5 | 3.3 | 1 | 3.1 |
| Minimum | 2.1 | 1.4 | 0 | 1.1 |
| Observations | 40 | 40 | 40 | 40 |

Source: Researcher's Computation (2021).

Table 2 helps to provide some insight into the nature of the selected listed health care firms in Nigeria. Firstly, it was observed that on the average, in a 5-year period (2016-2020), the listed health care firms in Nigeria were characterized by positive operating cash flow (PCF) value of 1.956. This is an indication that the entire health care firms in Nigeria have positive operating cash flow value with a standard deviation value of .4566141. The average board gender multiplicity (BGM) for the sampled firms was 3.365 with a standard deviation value of .6757902. This means that firms with BGM values of 3.365 and above have positive operating cash flow. There is also a high variation in maximum and minimum values of BGM which stood at 4.5 and 2.1 respectively. This wide variation in BGM values among the sampled firms justifies the need for this study as the researcher assumes that firms with higher BGM values are firms with higher operating cash flow performance than those firms with low BGM values.

Board Nationality Multiplicity (BNM) on the other hand was characterized by a mean value of 2.6725 with a standard deviation value of .6488599. This means that firms with BNM values of 2.6725 have positive operating cash flow. Also, there is also a high variation in maximum and minimum values of BNM which stood at 3.3 and 1.4 respectively. This wide variation in BNM values among the sampled firms justifies the need for this study as

the researcher assumes that firms with higher BNM values are firms with higher operating cash flow performance than those firms with low BNM values.

Similarly, Board Ethnicity Multiplicity (BEM) was characterized by a mean value of 1.956 with a standard deviation value of .4566141. This means that firms with BEM values of 1.956 and above have positive cash flow. Also, there is also a high variation in maximum and minimum values of BEM which stood at 1 and 0 respectively. This wide variation in BEM values among the sampled firms justifies the need for this study as the researcher assumes that firms with higher BEM values are firms with higher operating cash flow performance than those firms with low BNM values.

Table 3: Collinearity Statistics . estat vif

| Variable | • | 1/VIF |
|----------|------|----------|
| BGM | 2 80 | 0.345747 |
| • | 2.05 | 0.488350 |
| • | 1.86 | 0.539029 |
| ' | + | |
| Mean VIF | • | |

From the table above, the TV ranges from 0.345747 to 0.539029 which suggests non multi-collinearity feature. The VIF which is simply the reciprocal of TV ranges from 1.05 to 1.15 also indicates non multi-collinearity feature.

4.1. Test of Hypothesis

Table 4: Result on the Relationship between Board Multiplicity and Cash Flow Performance of Health Care Firms in Nigeria.

| Source | SS + | df | MS | | | Number of c F (3, 36) = | |
|----------|---------------------------------|----|------------|--------|-------|---------------------------------------|----------------------|
| Residual | 2.81640472 5.31495539 + | 36 | .147637650 | | | Prob > F R-squared Adj R-square | = 0.0014 = 0.6464 |
| | • | | .208496413 | STA PA | | Root MSE | |
| OCF | Coef. | | Std. Err. | artin. | P> t | [95% Conf | . Interval] |
| | | | | | | | |
| | .3096286 | | .1240076 | 2.50 | 0.017 | .0581296 | .5611277 |
| BNM | .3626978 | | .1612635 | 2.25 | 0.031 | .6897554 | .0356402 |
| | .3626978 | | | | | | |

Source: Result output from STATA 15.

4.2. Discussion of Findings

The result of the analysis of the study using OLS Model is expressed as follows:

 $\mathbf{H_{01}}$: Board Gender Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

In view of the above analysis as shown on table 4, the result shows that there is a significant and positive relationship between board gender multiplicity and operating cash flow performance of listed health care firms in Nigeria. With a P-value of 0.017, the test is

considered statistically significant at 5% level. This could be verified with the coefficient of correlation of 31% which indicates that board gender ensures corporate cash flow performance by 31%. Based on this, we rejected the null hypothesis and accepted alternate hypothesis which contends that board gender multiplicity has significant relationship with cash flow performance of Health Care Firms in Nigeria. By implication, corporate organizations with high proportion of women in board composition have a higher performance.

This agrees with the a priori expectations of Onyali and Okereke (2018), Bukar et al (2020), Iyafekhe and Ohiokha (2017), Endraswati (2018), Daniel et al (2020) who found significant relationship between board gender diversity and corporate performance.

 H_{02} : Board Nationality Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

In view of the above analysis as shown on table 4, the result shows that there is a significant and positive relationship between board nationality multiplicity and operating cash flow performance of listed health care firms in Nigeria. With a P-value of 0.031, the test is considered statistically significant at 5% level. This could be verified with the coefficient of correlation of 36% which indicates that board nationality multiplicity ensures flow cash performance by 36%. Based on this, we rejected the null hypothesis and accepted alternate hypothesis which contends that board nationality multiplicity has significant relationship with cash flow performance of Health Care Firms in Nigeria. The implication of this is that corporate organizations with high proportion of foreigners have higher performance.

This is in tandem with the study of Ilogho (2017), Iyafekhe and Ohiokha (2017), Daniel et al (2020) who found the relationship between board nationality diversity and corporate performance significant.

 H_{03} : Board Ethnicity Multiplicity has no significant relationship with Cash Flow Performance of Health Care Firms in Nigeria

In view of the above analysis as shown on table 4, the result shows that there is a significant and positive relationship between board ethnicity multiplicity and operating cash flow performance of listed health care firms in Nigeria. With a P-value of 0.000, the test is considered statistically significant at 1% level. This could be verified with the coefficient of correlation of 67% which indicates that board ethnicity multiplicity ensures cash flow performance by 67%. Based on this, we rejected the null hypothesis and accepted alternate hypothesis which contends that board ethnicity multiplicity has significant relationship with cash flow performance of Health Care Firms in Nigeria of health care firms in Nigeria.

This agrees with the a priori expectations of Ilogho (2017), Daniel et al (2020) who found significant relationship between the variables.

5. Conclusion

The study having developed a model fit on board multiplicity using (BGM, BNM & BEM) captured that BGM, BNM & BEM have joint effect on firms

cash flow performance. Based on this, concludes that board multiplicity ensures cash flow performance of listed firms in Nigeria.

5.1. Recommendation

Based on findings of the study, the following recommendations are suggested:

- 1. Firms should increase the number of female directors in the board as high proportion of female directorship presence ensures cash flow performance.
- 2. Since the study found significant and positive relationship between board nationality multiplicity and cash flow performance, a balanced approach towards the hiring of Foreign Directors was recommended by listed health care firms in Nigeria. With this development, cash flow performance would constantly be maintained
- 3. Ethnic composition of board of directors of listed health care firms in Nigeria should be integrated into the corporate governance practices as allowing for a more ethnic balance translates into better financial performance.

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