

BOARD DIVERSITY AND FINANCIAL PERFORMANCE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

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CITATION: Aziekwe, O. & Okegbe, T.O. (2024). Board diversity and financial performance of listed consumer goods firms in Nigeria, *Journal of Global Accounting*, 10(1), 156 – 190.

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Available: <https://journals.unizik.edu.ng/joga>

Key words: Age Diversity, Board Diversity, Cashflow Return on Investment, Financial Performance, Gender Diversity, Nationality Diversity

ABSTRACT:

The main objective of the study is to examine the effect of board diversity on the financial performance of listed consumer goods firms in Nigeria. The specific objective was to determine the effect of nationality diversity (BND), gender diversity of corporate board (BGD) and age diversity of corporate board members (BAD) on cashflow return on investment (CROI) of listed consumer goods firms in Nigeria, with firm size (FSZ) as the control variable. The study adopted ex-post facto research design on a population of twenty-one listed consumer goods firms on the Nigerian exchange group. The sample size of fifteen firms used in the study was determined through purposive sampling. Secondary data were sourced from the firms' annual reports over a period of ten (10) years, covering the years 2013 to 2022. Panel-corrected standard errors (PCSE) regression was applied in testing the hypotheses, which revealed that: Nationality diversity has a negative but insignificant effect on cashflow return on investment of listed consumer goods firms in Nigeria (p-value = .359); Gender diversity has a positive but non-significant effect on the cashflow return on investment of listed consumer goods firms in Nigeria (p-value = 0.080); Age diversity has a positive and significant effect on the cashflow return on investment of listed consumer goods firms in Nigeria (p-value = 0.007). In conclusion, the negative impact of nationality diversity on cashflow return on investment shows the need for organizations to carefully manage the challenges associated with diverse national backgrounds, emphasizing effective communication and cultural alignment. It is recommended that organizations should carefully evaluate and manage the composition of their leadership teams with regard to nationality by fostering inclusive leadership practices and providing cross-cultural training to mitigate potential challenges associated with nationality diversity and enhance overall financial performance..

1. INTRODUCTION

Companies are competing in a global environment nowadays. In order to achieve firm strategies and goals directors are to understand diverse stakeholder's claim and customers need. Board diversity plays an important role in enhancing value, and attracts investors prior

to fresh talents and experiences exhibited by different members of the board. It has been argued by a literature that board diversity reflects the diversity of the society and community serve by the firm. This reflection strengthens the social contract between a business and its stakeholders which in turn improves its strategic fit that the business has with its environment. Some years ago with the prevalence high profile financial scandals and a significant number of corporate failures, there is a need to improve the boardroom effectiveness and efficiency. Deep insight, multiple perspectives, and wealth of experience are necessary for robust discussions of the challenging issues, and all these are attributes of a diverse board. To address this issue, there has been a rigorous research by various scholars to bridge these gaps. The result has it that board diversity is a mechanism for enhancing boardroom effectiveness. Several countries have move toward more diverse board by implementing a quotient of women representation. One of the countries is Norway that initiates this effort in 2003 by enforcing 40% female member in the boardroom. Other countries that implement suit are Finland (in 2005) and Iceland (in 2010), they passes law requiring 40% of firm board members to be women (Nguyen, 2020).

Since then scholars have continue to focus on the new perspectives of director's personal characteristics and behavior and its effectiveness of firm performance. In view of the benefit of board diversity, Singapore stock exchange requires issuers to formulate board diversity policies from 1st January 2022 to address diversity related aspects such as gender, skills and experience. The introduction of code of corporate governance in 2018 aim at institutionalization of corporate governance best practices in Nigerian companies and to reform the boardroom which should improve efficiency in overall performance in the firm. The problem with board diversity in Nigeria firm is that there is no law in Nigeria which provides a quota system for board diversity. This poses a major challenge to corporate governance framework. Since firms are establish primarily to make profit, it is inevitable that board diversity and financial performance of firms interlinked. As Nigeria is a developing country, there is need for diverse members to be among the corporate Leaders. This will be of high benefit as ideas, experience, and technology are shared in the company which contributes definitely to the growth of the firm. Mishra, and Jhunjhunwala, (2013) founds that the agenda for Firm is not really to have people from different nationalities, gender, and ethnicity as corporate board members, the real motive is to have people with diverse outlooks and yet fit the culture. Board Diversity is essential prior to the complex and dynamic issues companies are facing presently (Reynolds, 2018).

Firm's performance is a description of level of fulfilled task of business's aim or target to obtained output conclusion at the end of a business period (Yildiz, 2010). Financial performance is a complete evaluation of a company's overall standing in categories such as asset, liabilities, equity, expenses, revenue and overall profitability. For internal users financial performance is examined to determine their respective company's wellbeing and performance among other benchmarks. For external users, financial performance is analyzed to dictate potential investment opportunities and to determine if a company is worthwhile. For example, in Asia and Africa, the inclusion of directors with diverse educational and professional backgrounds has been found to generate unique perspectives that can lead to improve financial performance (Morales & Marquina, 2009). Board members influence the firm financial performance through set out strategies, and relevant decision making. With intergroup contacts, diversity could enhance group performance because members on a diverse team bring a greater pool of knowledge, perspectives, priorities, skills, and abilities to identify solutions and solve problems, enhancing the ability of the groups to perform. Maine (2005) outlines that Diversity in boards of directors would as well improve the value of corporate result as the members of the boards are directly involved in issuing, restructuring, takeover exercises, introducing measures to enhance regulatory, transparency, accountability and independence. To measure board diversity, the study uses three proxies: nationality diversity, gender diversity, age diversity. These proxies is used to measure the extend in which the boardroom has been diversify. To measure firm financial performance, the study uses one proxy: Cashflow Return on Investment (CFROI). This proxy indicate how effectively a firm's board members contributed to increased financial performance of the firm thereby increasing the shareholders and other stakeholders wealth.

In Nigeria, there have been corporate failures witnessed over the years, both financial sector and manufacturing sector and this has contributed drastically to the persistence recession witnessed in Nigerian economy. These issues could be as a result of homogeneity of board members in most cases. The introduction of code of corporate governance in 2018 aim at institutionalization of corporate governance best practices in Nigerian companies and to reform the boardroom which should improve efficiency in overall performance in the firm. The code further recommends that board should promote diversity in their membership and highlighted gender as a key attribute to be recognized. Despite an increase in the number of women gaining managerial position, women representation on board of director in Nigerian firm is still relatively low compared to some developed countries. Some challenges facing Nigerian corporate governance is as a result of diverse population with over 250 ethnic groups and over 500 languages in Nigeria. This diversity has prompted cultural sentiments that

relegate women as minority and Men majority in strategic positions. Another challenge is the corporate governance framework which is based on the Anglo-Saxon model, means that board members are typically appointed by shareholders. This can make it difficult for minority groups to get represented on board. In addition, there is no law in Nigeria which provides a quota system for board diversity. This poses a major challenge to corporate governance framework. For example, Norway implemented a law which requires that at least 40% of the directors needs to be Female (Carter, D'souza, Simkins, & Simpson, 2010). Board diversity is essential prior to the complex and dynamic issues companies are facing presently. Some researchers argue that weak legal controls and considerable government intervention will affect corporate governance in developing country (Luo, Xiang & Huang, 2017).

It has been a long debate by some researchers about the effect of board diversity. While the determinants of board diversity are well documented, it's effect on firm's financial performance remain unclear. Most of the research on board diversity has been conducted in the bank sector, with limited studies in consumer goods firm focusing on financial performance. This study aims to fill the variable gap by considering Age, Nationality, and Gender diversity of board members as the independent variable and Cashflow Return on Investment (CFROI) the dependent variable as the measure of financial performance in the Consumer goods firm.

1.1 Objectives of the Study

The main objective of the study is to examine the effect of board diversity on the financial performance of listed consumer goods firms in Nigeria.

The specific objectives are to:

1. determine the effect of board nationality diversity on cash flow return on investment of listed consumer goods Firms in Nigeria
2. ascertain the effect of board gender diversity on cash flow return on investment of listed consumer goods Firms in Nigeria.
3. examine the effect of board age diversity on cash flow return on investment of listed consumer goods Firms in Nigeria.

1.2 Hypotheses

H₀₁: Nationality Diversity has no significant effect on cash flow return on investment of listed consumer goods Firms in Nigeria.

H₀₂: Gender Diversity does not significantly affect cash flow return on investment of listed consumer goods Firms in Nigeria.

H₀₃: Age diversity has no significant effect on cash flow return on investment of listed consumer goods Firms in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Board Diversity

Board of directors form one of the pillars of a corporate governance framework. Board diversity becomes a strategic imperative for many organizations that have an agenda to profit from the expanding opportunities and reaping the full potential of this vicissitude. Board diversity refers to the inclusion of individuals from various backgrounds, experiences, demographics competencies, and skills on a firm's board of directors (Mukuta, 2021). The goal of board diversity is to make board less homogenous by considering ethnic diversity, age diversity, nationality diversity, gender diversity, among other factors. Board diversity has many benefits some of which includes: more productive discussion, better decision making reducing the risk of group thinking, and improvement to brand and reputation (Ian Warner, 2022). Maina (2005) outlines that diversity in boards of directors would as well improve the value of corporate result as the members of the boards are directly involved in issuing, restructuring, takeover exercises, introducing measures to enhance regulatory, transparency, accountability and independence. A well balanced board will have more representatives of users and customers of its product in the boardroom to make an informed decision. Wahid (2019) argues that Firm with diverse boards commits fewer financial reporting mistakes and engages in less fraud.

Board diversity or board heterogeneity is thought to be one of the approaches that may improve governance decision-making and enhance firm growth and development. Board diversity is not limited to simple changes in the demography of board members but also a diversification of goals and objectives of the board and the corporation, (Davis, 1997).

Top five reasons for the pursuit of diverse board reported in a survey of Fortune 100 companies comprised: better utilization of talent, increased marketplace understanding, enhanced breadth of understanding in leadership positions, enhanced creativity and increased quality of team problem-solving (Robinson & Dechant, 1997). Companies are competing in global environment nowadays faced with many challenges and complexities, so a good diverse board having a broad set of competencies is crucial to overcoming the storm.

2.1.2 Nationality Diversity

Board nationality diversity refers to as the proportion of foreign board to overall size of the board in an organization. Nationality diversity in this study refers to foreign individual director being a member of corporate board of a Firm. Due to different background, Skills, Expertise, Social network that Nationality may provide, nationality diversity has the potential to increase board performance (Lee & Farh, 2014). Masulis, Wang, & Xie, (2012), founds that firms with foreign individual Directors makes better cross – border acquisitions when the targets are from the home regions of foreign individual Directors. These Directors offer unique skills, knowledge and insight into how best to cope with multiple counterparts as the Firm venture into new or untested investment areas. Heterogeneity in both the firms ownership base and it's operations have a positive effect on the incidence of nationality diversity on board (Estelyi & Nizar, 2016). They believe that Directors with a diverse nationality background are likely to provide better monitoring of firm manager and promote product or geographic diversification.

Naveen, Daniel and McConnell (2013) found that foreign directors in the U.S. firms, especially those from countries that are dissimilar to the U.S. in terms of 'business environment' (for instance, dissimilar directors), provide valuable advice. Although there are other studies which argue the positive impact of diversity on corporate board. Darmandi (2011), Oxelheim and Randoy (2003), believe that a team comprising of Nationals and Foreign are advantageous to a firm. They connect inter network, management entrenchment avoidance, and commitment to shareholders right. Masulis et al. (2012) found that foreign independent Directors are associated with significantly poorer performance, especially when their business presence in the foreign independent director's home region becomes less important. Miletkov, Poulsen, and Wintoki (2014) take these arguments further and conduct a cross-country study to examine the hypothesis that the impact of foreign directors may be different in countries outside the US. The study shows that the effect of foreign directors on Firm's performance is positive following cross-border acquisitions and when foreign directors come from a country with strong legal protection of investor rights. They also find that foreign directors are associated with poorer operating performance in a firm that is located in countries with the highest quality legal institutions.

2.1.3 Gender Diversity

Gender diversity on board implies not only the inclusion of women on boards but also the retention of female directors for longer tenures after being appointed, enhancing egalitarian participation in board decision processes (Nili, 2019). Gender diversity is considering Women

as members of corporate board or directors in a corporation. It has been a known nature of practice for Board of Directors to comprise of Male as members ignoring what Women can contribute if elected in top positions. Lincoln and Adedoyin in their study from International Finance Corporation, IFC (2019), the practical situation is sexual stereotyping of social roles, discriminating traditions and cultural prejudices. This indisputably places Men as the Leaders of the society limiting Women participation in top positions in Leadership. The marginalization of feminine gender and their exclusion from the mainstream economic activity is tantamount to wastage of precious human resources which if managed properly and efficiently can extend a valuable contribution to the world's overall economic and social wellbeing (Nighat, Nasira, Moazzam, & Yammima, 2016). The concept of practice has gained wider recognition among contemporary sociological theory and research enabling gender to be conceived as a situated social practice realized through social interaction (Poggio, 2006). The idea of gender as a practice has been advanced by many authors. According to some authors, Women are more trustworthy and collaborative than Men, which can as well Improve Board dynamics (IFC, 2019). Women are not substitutes for Men directors of equal ability and qualifications; however, Women may have unique attributes that may increase performance of the board and ultimately performance of a company (Simpson et al., 2010). Gender socialization theory states that men and women are different in their orientation toward moral principle, largely because women have better internalized ethical and communal values through their social roles (Hyun, Yang, Jung, & Hong, 2016). Martin (2003, 2006) observed gendering processes in organizations in terms of two-sided dynamic: gendering practices, and the practicing of gender (Poggio, 2010). Females bring different characteristics to boards (Eagly, Johannsen & Engen, 2003), which may lead to improved board effectiveness as a result of the improved quality of board deliberations and better supervision of the firm's disclosures (Gul, Srinidhi, & Ng, 2011). Females bring a host of different soft-skills to their jobs which could manifest in the form of leadership competencies (Zenger & Folkman, 2012). Greater proportion of Female Directors in a company's corporate leadership, a company would most likely be ethical, and develop good corporate citizenship (Landry, Bernard, & Bosco (2016).

The corporate Leadership center founded in US as a business academic forum in its program "Leading Women Executive" gives recognition and support to Women aiming to help qualifying Women rise to top in position of Leadership. Some countries like France, Iceland, and Netherland are among the nations that have implemented Gender legislation (Marinova, Platenga, & Remey, 2010). While some underdeveloped Countries like Nigeria are yet to enact such law. A study by Hoel (2008), founds that Norway is the globally recognized

Country with 40% Female role for public limited Firms / corporation. Positive performance effect of board gender diversity implies that a higher number of Women in Corporate top positions or on board of Directors will relate to increased Firm productivity and profitability (Marinova et al, 2010). Letendre (2004) suggests that female board members will bring diverse viewpoints to the boardroom and will provoke lively boardroom discussions.

2.1.4 Age Diversity

In simple term, Board Age diversity in refers to having Leaders of different ages in a company. A survey carried out by Price water house coopers PwC, 2017(annual corporate Director's survey) Directors opined that Age diversity was the most crucial form of diversity. Age diversity helps firms to better understand and meet the needs of a diverse customer base. This can improve customer satisfaction, loyalty and ultimately the Firms bottom line (India corporate social responsibility, 2023). Barker and Mueller (2002) in their study states that older managers are more risk averse. This shows that younger Managers are more inclined to undertake risky strategies. Younger people are more flexible, have more energy and are mostly better educated. Gardazi (2020), founds that younger Boards members may be less traditional and more aware of environmental and sustainability issues. Younger managers tend to have higher ability to process new ideas, lower willingness to accept status quo, and less interest in career stability (Cheng et al. 2010). For firms to perform effectively & efficiently, they should include in their Board both younger and average old members. As younger people are flexible, brains sharp to capture new technologies, available to take risk, creative in new ideas while older people (average) have more experience in the area concern, and can handle some abnormal situation that arise sometimes in a Firm amicably. Emergence of fresh ideas that align with what is trendy might not be conceivable with a more homogeneous board (India corporate social responsibility, 2023).

2.1.6 Firm's Financial Performance

Firm performance refers to the ability of a company to achieve such high profits, product quality, a large market share, financial results were good, and the continuity of the company at any given time, and to make it happen it needs relevant strategies (Aggreh, Abiahu & Nworie, 2023). Firm performance can also be used to see as the extent to which an organization is able to meet the needs of stakeholders and its own needs for survival (Griffin & Ricky, 2003; Nworie, Onyeka & Anaike, 2023). Camison and Villar-Lopez (2012) states that traditional financial performance is the index most commonly used to measure the performance of the organization by the researchers. Performance is a concept which is shown by organization's prominent employees while fulfilling their tasks. This is why

establishments' success is directly proportionate to their performance (Benligiray, 2004). Business performance is a description of level of fulfilled task of business's aim or target according to obtained output at the end of a business period (Yıldız, 2010; Nworie, Okafor & Mba, 2023)). Business performance can be scaled only by subjective method or only by objective method. It can also be seen in the literature that both subjective and objective methods are used together to avoid short-comings of each method. It has become evident that financial performance measures a firm's health based on Asset, Liability, Revenue, Expenditure, Equity, and Profitability, sales and market share. Therefore, the firm's performance in this study will use Cash Flow Return on Investment (CFROI) to determine Firm's performance.

2.1.7 Cash Flow Return on Investment

A cash flow return on investment (CFROI) is a valuation metric that acts as a proxy for a firm's economic return. The return is compared to the cost of capital, or discount rate, to determine value added potential (Kenton, & Battle 2021). It was developed by Holt, 1991 with a creation of valuation metric which believes by founders to give more insight into the economic return of an entire Firm. It is also the average economic return on a Firm's entire investment project in a given year. CFROI is a valuation metric that looks at cash flow, relative to a Firm's cost of capital (Kenton, & Battle, 2021)

$$\text{CFROI} = \frac{\text{Operating cash flow}}{\text{Capital Employed}}$$

Capital employed: Total equity+ short term debt+ capital lease obligations + long term debt. In effect, it is the IRR that is compared with the hurdle rate to check whether or not the subject company is performing better than the set expectations.

2.1.8 National diversity and Firms financial performance

It is a known fact that firms choose board directors for their characteristics. Heterogeneity in both the firms' ownership base and it is operations have a positive effect on the incidence of nationality diversity on board (Estelyi & Nizar, 2016). These scholars believe that Directors with a diverse nationality background are likely to provide better monitoring of firm manager and promote product or geographic diversification. Broome and Krawiec (2008) founds that the measures of the scope and complexity of the firm's operation are positively related to the proportion of individual outsiders on the board. Corporate board with diverse nationalities will improve firm's performance by increasing board independence (Carter et al., 2003). Masulis, et al. (2012) found that foreign independent Directors are associated with

significantly poorer performance, especially when their business presence in the foreign independent director's home region becomes less important.

Some findings showed mixed reactions; Blessing, Vincent, Ben, and Benjamin (2019), Garba and Abubakar (2014), Choi, Park, and Yoo (2017), Rodrigues (2014), found a positive relationship between board nationality diversity and firm financial performance. On the other hand, Osiregbmhe (2017), Ilogho (2017), Olaoti (2016), Ilaboya and Agafoke (2017) found a negative relationship between board nationality and firms financial performance.

2.1.9 Gender diversity and Firms financial performance

McKinley insight (2023) notes that company in the top quartile for gender diverse executive suites were 15% more likely to generate above average profitability compared to the bottom quartile of company whose executive teams were predominantly locals and Male. Carter, D'Souza, Simkins and Simpson (2010) find that a gender diverse board of Directors has a positive impact on Firm's performance. Most relevant for investors, Rakhi Kumar, 2019 found that companies with strong Female leadership at the board level generate a return on equity 36.4 percent higher than companies without critical mass of Women on their board. Diverse companies enjoy 2.3 times higher cash flow per employee (Deloitte, 2021). In a previous study,

The findings on the relationship between gender diversity and financial performance are inconclusive; for example, Carter, D'Souza, Simkins and Simpson (2008) find a positive relationship between gender diversity and the market value of firms. Adams and Ferreira (2009) find a positive relation between performance measured as Tobin's q and ROA and the fraction of women on boards. Nizar, Ahab, and Abdel (2021), Daniel, Aza, and Pam (2020), Onuora, Obiora, Anisesodo and Ebele, (2022), Olaoti (2016), found a positive relationship between board gender and firm financial performance. However, there are other studies which argue on the positive impact of gender diversity. Farrell and Hersch (2005) find that women board members have no major impact on firm performance, and suggest that firms seek members of minority groups for the simple reason that they want to build a public image of inclusiveness. Ilaboya and Asgafoke (2017), Olumide (2018), Ndubisi et al (2021), finds that gender diversity have no significant influence on financial performance

2.1.10 Age Diversity and Firms Financial Performance

With the constant development of new technology in this new century, it is clear that in order for Firms to perform well, maintain relevance and attain sustainability, their board must be dynamic, diverse, and adapt to times. Therefore the diversity could increase firm performance

because it increases the creativity and the problem solving capability of a team (Li, Shu, Lam & Liao, 2011). Older people are not left out while discussing on Age diversity. Some researchers provide evidence that older CEO or board chairman is positively associated with higher financial performance. According to Cheng (2010), older chairmen in China have significant impacts on some performance measures such as ROA, cumulative returns and abnormal returns. This could be due to richer experiences and practices that come with age. Older members have obtained experience in a specific industry, because of the several years as a worker. And, also they have a higher sense of responsibility. Some studies have examine the relationship of age diversity and firm performance; Okoye, Amahalu, and Obi (2018), Emad, Eldeen, Elbayoumi, Basilony, and Mohammed (2021), Lawrence, Nguyen, Annette, (2023), found a positive relationship between age diversity and firms financial performance.

2.2 Theoretical Review

2.2.1 Resource Dependency Theory

Pfeffer and Salancik (1978) developed the resource dependency theory to explain how organization's behavior is affected by the external resources they possess. Resource dependency theory suggests that Board diversity offers the opportunity for the firm to access diverse groups of contact, relationship and social ties. It predicts how this type of firm capital based on board relationship should provide resources to the firm. Resource dependency theory argues that directors relationship with those outside of the board result in capital consisting of both human capital such as experience, expertise, reputation as well as social capital such as network of ties to other firms (Hillman & Dalziel, 2003)

Another assumption of Resource Dependency theory is that both Directors serve as both providers of resources and monitors of Managers. Directors provide expertise and resources including strategic advice, communication channel to external organization support from important element outside the firm, an legitimacy (Pfeffer & Salancik, 1978). specifically, Resource dependency theory literally argues that board of directors are a primary method of absorbing critical elements of environmental uncertainty into the firm. Consistent with Resource dependency theory, Provan (1980) finds that firms that can attract and entice influential community members onto the board can acquire critical resources from the environment. Booth-bell (2018), and Walt and Ingley (2003) argue that diverse Directors enjoy different types of network ties and social capital. Board diversity presents an opportunity for firms to access the diverse connections brought to the board, thus enabling it to span different contacts. Resource dependency theory recognizes diverse groups to the extent that those groups, organizations, and individuals influence the firm's survival and health.

Resource dependency theory helps firm to gain access to financial resources both in foreign environment. Therefore, expanding nationality diversity, gender diversity, the board aggregate human and social capital will increase (Rodriguez, 2014).

The underpinning theory for this study is Resource dependency theory and it is based on the idea that Board diversity offers the opportunity for firm to access diverse groups of contact, relationship and social ties. A resource dependency theory of governance will result in a board that emphasize how well the board manage, connecting the firm to information and contact to help the firm reduce its' external dependencies (Pfeffer & Salancik, 1978)

2.3 Empirical Review

Oranefo and Unamma (2023) examined the impact of corporate governance diversity on the financial distress of Nigerian manufacturing firms over the years (2011-2020). The study used an Ex-Post Facto research design. The population of the study included all manufacturing companies listed on the Nigerian Exchange Group (NXG) with a sample size of fifty-five (55) manufacturing companies. The data was obtained from the annual reports of the sample companies submitted by individual companies, the Nigerian Exchange Group (NXG). A panel least square regression analysis was performed to confirm the hypothesis. The study found that the diversity of non-executive directors has no statistically significant effect on the Altman z- score of listed industrial companies in Nigeria.

Maria, Eze, and Grace (2023) examined the effect of corporate leadership diversity on financial distress of selected manufacturing companies in Nigeria from (2011-2020). Two research questions and corresponding three hypotheses were formulated for the study. Ex-post facto research design was employed in the study. The population of the study included all manufacturing firms quoted on the Nigerian Exchange Group (NXG) as at 31st December 2021 with a sample size of Fifty-five (55) manufacturing companies selected from the population sector. The panel least square regression analysis was done in validating the hypotheses. The study revealed that racial diversity and gender diversity have no significant effect on Altmans z-score of quoted manufacturing firms in Nigeria.

Lawrence, Nguyen, and Annette, (2023) examined the impact of Leadership diversity on firm performance in Singapore public listed companies. Based on the random effects regression analysis using data from 577 companies, the result generally provides support for a beneficial diversity impact. Gender, age, and education Leadership diversity were found to have a positive influence on financial performance. Further found that gender diversity and performance to have an inverted U-shaped relationship, with inflexion point being gender parity.

Atagboro, and Ogiriki, (2022) examined the impact of a diverse board on the financial efficiency of corporations in Nigeria. The study aimed to determine if and how a more diverse board of directors impacted financial efficiency at Nigerian corporations. Twenty two (22) deposit money banks traded on the Nigerian exchange group had their 2020 audited financial reports combed through for supplementary information. Researches employ ordinary least squares estimation through E-views statistical software. The Return on Asset was the dependent variable, whereas the size of the board, makeup of the board, and the percentage of Women on the were the independent variable. According to the result of regression analysis, the nationality of board members has little effect on the Return on Assets, although the gender and size of the board both have substantial effects.

Basher (2022) empirically investigated the impact of board diversity on the performance of 13 banks in Jordan during the period of 2005 to 2020. Panel data was collected from the Amman Stock Exchange (ASE) and the formal websites of the different banks. Fixed effect and random effect techniques have been applied to check the impact of board diversity on banks' performance. The result found that the larger the size of the bank, the better their return since they hold more deposits and this increase their investment opportunities. In addition, the larger the size of experienced directors would be included in the decision making process.

Ali, Saleh, Ayman, and Hamid (2022) examined how board diversity in terms of the gender and educational level of Directors affect the performance of Nigerian stock exchange companies. The study utilizes a sample of 67 listed companies from the Nigerian stock exchange over eight years, from 2012 to 2019. A quantitative method using a deductive approach was adopted in conducting fixed effect and generalized method of moment's estimation for robust findings. The findings support the existence of a significant positive influence of both education and gender diversity on the companies' performance

Niyi, and Dare, (2022), investigated the influence of gender diversity on the firm value of Nigerian listed deposit money banks. Using the census sample technique, the Ex post-facto research design was employed with a sample of 13 listed deposit money banks (DMB). The article draws a secondary Data from the annual audited financial statement of the DMB spanning from 2011 to 2020. Data was analyzed using descriptive statistics and panel data regression. The results reveal that gender diversity variables, female board composition, and female board audit committee had a statistically insignificant negative effect on firm value. However, the female Chief Executive Officer (CEO) showed a negative and significant impact on firm value. It implies there are weak selection criteria for the female CEO.

Nome and Nwankwo (2022) examined the Effects of Board Diversity on Financial Performance of Information and Communications (ICT) Firms in Nigeria. The study adopted ex-post-facto design using secondary data collected from annual accounts and reports of ICT firms in Nigerian Stock Exchange (NSE) covering seven (7) firms over a period of five years ranging from 2016 to 2020. The selection of 2016 to 2020 was necessitated by the rapid changing ICT business environments which Nigeria is not an exception. In all, there are eight quoted ICT firms in Nigeria but the study focused on the seven quoted ICT firms that have the required data. The ordinary least square panel regression analysis was used for the data analysis applying Generalized Method of Moment (GMM) analysis. E-view version 9 software was used for analysis where necessary. The study found that Board Diversity has mixed effects on financial performance of ICT firms in Nigeria. Specifically, the board size has significant positive effects on financial performance of ICT firms in Nigeria likewise foreign director in board of directors while board composition and board gender have low negative effect on financial performance of ICT firms in Nigeria.

Onuora, Obiora, Anisesodo and Ebele, (2022) examined the relationship between board heterogeneity and cash flow performance of quoted firms in Nigeria. In order to determine the relationship between board heterogeneity and cash flow performance, board heterogeneity was proxy using board gender heterogeneity while cash flow performance on the other hand was proxy by operating cash flow, financing cash flow and investing cash flow. The study adopted Ex Post Facto Design and data were collected from the annual reports and accounts of the listed consumer goods 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 heterogeneity and cash flow performance of consumer goods firms in Nigeria at 1%-5% significant level.

Nizar, Ahab and Abdel (2021) examined the impact of gender diversity on firm performance in the Palestine companies. They employed historical research design, using two stage least square (2SLS). The sample setting was 16 non-financial corporation listed in the Palestine stock Exchange from 2008-2018. It was found that gender diversity has a positive and statistically significant impact on firm performance.

Etom, Mwosi, Sunday, and Poro, (2021), examined the effect of corporate governance on firm's financial performance amongst private business enterprises in Uganda. The study used descriptive and survey design. A mixed method approach which involved both qualitative and quantitative techniques was also used. The study found out that corporate governance significantly influences the financial performance of hotels and manufacturing firms in Lira

City and majority of the firms investigated performed on average financially. It was also established that firms whose boards demonstrate high integrity were likely to register positive changes in their financial performance than firms whose boards do not. The study also noted that board independence would propel the firm to grow to greater heights

David, and Okenwa, (2021) examined the effect of board attributes on firm performance of Nigerian quoted banks with international authorization. This study population was the entire quoted banks with international authorization and a sample of eight (8) banks was analyzed for a period spanning 2014-2018. From the results of the regression analysis, it was observed that all the explanatory variables had an insignificant effect on firm performance except for board meeting, which had a significant effect on firm performance. Our findings suggest that frequency of board meetings should be encouraged as this would create opportunity for more discuss on pertinent issues that affects the survival of the firm.

Emad, Eldeen, Elbayoumi, Basuony, and Mohamed (2021) examined the effect of board composition specially board multiplicity on firm performance using cross-sectional data from London Stock Exchange (FTSE 350) of non-financial companies with a total observations 3961 companies for the years 2000-2016. The study decomposed board multiplicity into age, gender, education, and nationality while considering FTSE 100 and FTSE 250 firms. The result of the study indicated that age multiplicity has a negative effect on firm performance, meaning that young board members enhance and increase firm performance. Furthermore, the study also found that education multiplicity has a negative effect on firm performance. The study also, found that, gender multiplicity has positive effect on firm performance, hence, if companies increase the number of females in the board of directors, firm performance is expected to increase. Finally, the study found that nationality multiplicity has a positive effect on firm performance.

Ndubuisi, Akwuobi and Onyeogubalu (2021) examined the effect of board gender heterogeneity and corporate diversification on cash flow performance of Deposit Money Banks (DMBs) in Nigeria. The study specifically examined the effect of gender heterogeneity and business subsidiary on operating, investing and financing cash flow performances. The study adopted the ex-post facto research design; as the goal is not to manipulate any variable but rather to establish effect. The population comprised quoted DMBs and the sample restricted to a purposive sample of six (6) banks whose annual reports were accessible for the period of 2005-2020 which is the time scope of this study. The data were analysed using the multiple regression technique. The results showed that gender heterogeneity and corporate

diversification does not have a statistically significant effect on cash flow performance jointly and individually.

Usman, Mohammed and Suleiman (2020) investigated the relationship between corporate diversity and financial performance of manufacturing companies in Nigeria, with specific reference to how gender diversity, educational diversity, and board size affect financial performance of manufacturing companies listed on the Nigerian Stock Exchange. This study selects 10 listed manufacturing companies using non-probability sampling method in the form of availability sampling technique for a period of 5 years i.e. 2014 to 2018. Using Return of Asset (ROA) and Return on Equity (ROE) as measures of firm performance. For the purpose of this work, the study variables were analyzed using multiple regressions to determine the variation in financial performance due to variation in corporate diversity. Descriptive statistics was used to provide summary statistics for the variables and subsequently, correlation analysis was carried out using Pearson Correlation technique for the Correlation between the dependent and independent variables, the findings of this study reveal that board size have a positive influence on manufacturing companies' performance. Also the findings on educational diversity indicate a significant positive relationship between corporate diversity and performance of manufacturing companies in Nigeria.

Daniel, Aza and Pam (2020) examined the impact of Board of Directors' heterogeneity on the financial performance of listed deposit money banks in Nigeria. This area of board diversity especially the ethnic diversity is still a novel area of research in Nigeria. The financial performance in this study was the dependent variable while nationality, gender and ethnic composition of Board of Directors were the independent variables. The population of the study consists of fourteen (14) listed deposit money banks in Nigeria as at 31st December 2019. Ten of these banks constituted the sample size for the period of ten years (2010-2019). The study employed panel multiple regressions as a tool for analysis. Secondary data obtained from the financial statements of the companies were analyzed. The result showed that gender and ethnicity of board directors had positive and significant impact on banks financial performance while, nationality of the board of directors showed a negative but significant relation to banks financial performance.

Ali and Abubakar (2020) examined the impact of ethnic diversity on financial performance of 67 listed non-financial companies in Nigeria, during a 6-year period ranging from 2012 to 2017. Tobin's Q and Return on assets (ROA) measures the financial performance. Ethnic diversity, board size and leverage are addressed in the Nigerian context. Descriptive statistics, Correlation and the contemporary 2-Step System-GMM estimator was used in the analysis

and the results show that ethnic diversity and board size has positive and significant impact on firm performance (Tobin's Q). By implication, the existence of different ethnic backgrounds in the board of directors has significant influence on performance of Nigerian firms. Conversely, the results using ROA indicated that ethnic diversity has negative insignificant impact on performance, while firm size has negative significant influence.

Fakile and Ezekiel (2019) examined the effect of board characteristics on financial performance of quoted ICT companies in Nigeria. Expo- facto research design using correlation and Multiple Least Squares (OLS) regression analysis were used. The study covered a period of five years from 2013-2017, using ICT companies in Nigeria. It was found that Board independence had significant effect on financial performance.

Blessing, Vincent, Ben, and Benjamin (2019) examined the influence of board nationality on the return on equity of money deposits banks in Nigeria. This study makes use of econometric procedure and data was collected through a secondary source of information. The population of interest for the study comprised the twenty-two deposit money banks listed on the Nigerian Stock Exchange (NSE) and the sample size consists of nine selected money deposit banks which were purposively chosen based on the consistency in their publication of their financial account up to 2016; and as well based on their equity. The finding shows that the board nationality brings diverse experience and expertise to bear on the operations of banks and it has a significant positive effect on the ROE of the selected banks.

Olumide (2018) examined the relationship between the number of women directors and the number of ethnic minority directors on the financial performance. Research design was both quantitative and qualitative in approach. 190 listed on the Nigerian Stock exchange between 2004 and 2013 were engaged. It was discovered that some ethnic groups have a positive and significant relationship with firm performance and that board gender has no significant financial effect on performance.

Mohammad, Abdullatif, and Zakzouk (2018) conducted a study titled '-The effect of gender diversity on the financial performance of Jordanian banks'. The sample comprised eleven (11) banks listed on the ASE. The study relied on secondary data; obtained from annual reports and accounts of the studied companies from the period 2009 to 2016. The study employed ordinary least squares (OLS) multiple regression technique to analyse the data. The results showed that there was a negative non-significant relationship between percentage of women on boards and top and medium-level executive management and financial performance (ROA) of the banks.

Okoye, Amahalu and Obi (2018) examined the effect of Board Diversity on Financial Performance of quoted Natural resources companies in Nigeria. The specific objectives are to ascertain the effect or otherwise of Foreign Directory and Board Size on Return on Assets, Return on Equity and Tobin's Q of quoted Natural resources companies in Nigeria from 2008-2017. Ex-post facto research design was used for this study. Secondary data were sourced from the publications of Nigeria Stock Exchange. Inferential statistics of the hypotheses were carried out with the aid of E-view 9.0 statistical software using Co-efficient of correlation and Multivariate Panel Least Square Regression analysis. Findings of this study showed Board Diversity has a significant positive effect on Return on Assets and Tobin's Q; a significant negative effect on Returns on Equity at 5% level of significance respectively.

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

Ilaboya and Asgafoke (2017) examined the relationship between board diversity and firm performance in Nigeria. Cross sectional research design using multiple regression technique and ordinary least square regression (OLS) technique was utilized. A census survey of the Banks quoted on the Nigeria Stock Exchange from 2010-2015 were engaged. It was discovered that Ethnic diversity and gender diversity have negative and significant relationship with firm performance.

Osiregbmhe (2017) conducted a study "Effects of board nationality and ethnic diversity on the financial performance of listed firms in Nigeria". The study adopted the ex post facto research design. The sample comprised sixty (60) non-financial firms with periodic observations from 2012-2015. The study relied on secondary data; obtained from the annual reports and accounts of the selected companies. The data was analyzed using ordinary least squares regression method. The results showed that ethnic diversity and board nationality had no significant influence on the financial performance (ROA, ROE, and Tobin's Q).

Ilogho (2017), examine the effect of board nationality and ethnic diversity on firm's 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 analyzed data from 60 non-financial firms with periodic observations from 2012-2015 using the ordinary least squares regression method. Yemini 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.

Maretno, Indrarini, and Ya-wen Yang (2017) examines the relation between the nationality and educational background diversity of directors serving on corporate boards and the firms' corporate social responsibility (CSR). We measure nationality diversity by directors' national citizenship and educational background diversity by countries from which they earned their undergraduate and post undergraduate degrees. It measures firms' CSR from the MSCI ESG ratings. Using a sample of U.S. firms, we find that having greater board nationality diversity and educational background diversity are positively associated with CSR. Our findings suggest that improving director nationality diversity and educational background diversity could improve firms' social performance. Our study also shows that the increasing trend of foreign nationals in the U.S. boards could shift the focus of U.S. corporations to be more stakeholder-oriented.

Nekhili, Nagati, Chtioui, and Nekhili (2017) investigated the impact of a gender- diverse board on voluntary CSR reporting in France. The sample consisted of listed companies included in the SBF 120 index in 2001-2011. They tested for differences in firm characteristics between firms with and without female board members using propensity score matching. They find that hiring an external assurance provider for CSR reporting is beneficial for firms without female managers but not for firms with female managers.

Modiba and Ngwakwe (2017) examined the relationship between greater participation of women in government and disclosure of sustainable development. The sample consisted of five companies selected from the Socially Responsible Investment Index (SRI) 2010-2014 of the Johannesburg Stock Exchange (JSE). They tested the hypotheses using panel regression. The study found a significant positive effect on women in government and energy information, social investment disclosure at the 0.05 significance level.

Yasser, Mamun, and Ahmed (2017) investigated the relationships between board gender diversity and corporate social performance in three Asia-Pacific countries (Malaysia, Pakistan, and Thailand). They find a significant relationship between gender diversity in councils and enhanced CSP in countries.

Ben-Amar, Chang, and McIlkenny (2017) examined the impact of female representation on firms' response to sustainability initiatives. The sample consisted of annual observations of 541 publicly traded Canadian firms from 2008 to 2014. They show that the probability of voluntary climate change disclosure increases with the proportion of women on the board.

Olaoti (2016) examined the impact of board of directors' heterogeneity on the financial performance of listed deposit money banks in Nigeria. This area of board diversity especially the ethnic diversity is still a novel area of research in Nigeria. The financial performance in this study was the dependent variable while nationality, gender and ethnic composition of Board of Directors were the independent variables. The population of the study consists of fifteen (15) listed deposit money banks in Nigeria as at 31st December 2012. Eleven of these banks constituted the sample size for the period of eight years (2005-2012). The study employed multiple regressions as a tool for analysis. Secondary data obtained from the financial statements of the companies were analyzed. The result showed that gender and ethnicity of board directors had positive and significant impact on banks financial performance while, nationality of the board of directors showed a negative but significant relation to banks financial performance.

Plantenga, and Remery (2016) conducted a study titled "Gender Diversity and Firm Performance: Evidence from Dutch and Danish Boardrooms." They investigated whether board gender diversity has a positive effect on firm performance in the Netherlands and Denmark. One hundred and eighty-six (186) listed companies were included in the sample. The study was based on secondary data; received since 2007. The study used a two-stage least squares estimation technique to confirm the hypothesis. The results showed that there was no relationship between board gender diversity and firm performance (mediated by Tobin's Q).

Richardson, Taylor, and Lanis (2016) conducted a study titled “Women on the board of directors and corporate tax aggressiveness in Australia: An empirical analysis. The sample comprised publicly listed Australian firms. The used secondary data; obtained from annual reports and accounts of the companies. They used multivariate regression analysis and the two-stage Heckman procedure. The results showed that presence of more than one female board member reduces the likelihood of tax aggressiveness.

3. MATERIAL AND METHOD

The study adopted *ex-post facto* research design to examine the effect of board diversity on the financial performance of listed consumer goods sectors in Nigeria. *Ex-post facto* research design is most suitable for the study since past events are investigated for causal relationship. By analyzing historical data, the study can draw upon a substantial amount of information, which increases the reliability and generalization of the findings (Ernst & Williams, 2014). The use of existing data also makes the research more time and cost-efficient. The study's population consists of all the 21 listed consumer goods in Nigerian Exchange Group, as of December 31st, 2022. The sample size for the study will be determined using purposive sampling, with a focus on firms that had complete annual reports available as at the time of this study. Consequently, the study will select fifteen (15) firms, as listed in Table 1, as its sample size.

Table 1 Sample Size

1. Cadbury Nigeria Plc.
2. sChampion Brewery
3. Dangote Sugar Refinery Plc.
4. Flour Mills Nig. Plc.
5. Guinness Nig. Plc
6. Honeywell Flour Mill Plc.
7. International Breweries Plc.
8. Northern Nig. Flour Mills Plc
9. Nascon Allied Industries Plc.
10. Nestle Nigeria Plc

11. *Nigerian Breweries Plc*
12. *Nigerian Enamelware Plc*
13. *PZ Cussons Nigeria Plc.*
14. *Unilever Nigeria Plc.*
15. *Vitafoam Nigeria Plc*

Source: Researcher's Compilation (2023)

The data for the study was sourced from secondary means, specifically from the published annual reports and accounts of the sixteen sampled consumer goods manufacturing firms in Nigeria. The data collection will span a period of ten (10) years, covering the years 2013 to 2022. Secondary data is preferred for this study due to its objectivity and the quantitative nature of the research, providing a reliable and comprehensive dataset for analysis. In this study, descriptive analytical tools, such as mean, standard deviation, and range values, were applied to provide a comprehensive summary of the data to be collected for each of the variables under investigation. These descriptive statistics enabled the researcher understand the central tendencies, variability, and the range of values exhibited by the different variables, shedding light on their individual characteristics.

To test the hypotheses, the econometric method of Panel Regression Approach (Panel-corrected standard errors regression) was employed. This approach is particularly suitable for this study as it allows for the examination of both time-series and cross-sectional variations, considering the data's longitudinal nature of ten years (2013 - 2022). Panel Regression Approach aids in understanding how changes in the independent variables influence the dependent variable across different entities (in this case, the consumer goods manufacturing firms) over time.

By utilizing the Panel Regression Approach, the study can account for individual variations among the sampled firms and control for potential confounding factors that might impact the relationship between the variables of interest. The findings obtained through this approach offered useful hints about the overall trends and dynamics governing the financial performance of consumer goods manufacturing firms in Nigeria and their relationship with corporate leadership diversity. Stata 14.2 statistical software was employed as the tool of choice for conducting the analyses. The present study uses cashflow return on investment as proxy for financial performance and

equally replaced board ethnicity with board age. These adjustments resulted in the model below, with firm size as the control variable.

$$CROI_{it} = \beta_0 + \beta_1 BND_{it} + \beta_2 BGD_{it} + \beta_3 BAD_{it} + \beta_4 FSZ_{it} + \mu_{it} \text{----- eqn1}$$

Where,

CROI = Cashflow return on investment

BND = Board Nationality Diversity

BGD = Board Gender Diversity

BAD = Board Age Diversity

FSZ = Firm Size

it = firm and year identifiers

β_0 = Constant

β_{1-4} = Regression coefficients

μ = Error term

For the test of the three hypotheses, we deployed the following models:

$$CROI_{it} = \beta_0 + \beta_1 BND_{it} + \beta_2 FSZ_{it} + \mu_{it} \text{-----eq2}$$

$$CROI_{it} = \beta_0 + \beta_1 BGD_{it} + \beta_4 FSZ_{it} + \mu_{it} \text{-----eq3}$$

$$CROI_{it} = \beta_0 + \beta_1 BAD_{it} + \beta_2 FSZ_{it} + \mu_{it} \text{-----eq4}$$

Table 2 Operational Measurement of Variables

Variable	Formula
Cashflow return on investment	$\frac{\text{Operating Cashflow}}{\text{Capital Employed}}$
Board Nationality Diversity	$\frac{\text{Number of foreign directors}}{\text{Total Number of Directors}}$
Board Gender Diversity	Blau index for diversity ($1 - \sum (p_i)^2$)
Board Age Diversity	African age index (Board range age) / Total Number of Board Members)
Firm Size	Natural log of firm's total assets
Researcher's Compilation, 2023	

4. RESULT AND DISCUSSIONS

4.1 Data Analysis

Descriptive analytical tools, such as mean, standard deviation, and range values, will be applied to provide a comprehensive summary of the data to be collected for each of the variables under investigation.

Table 1 Descriptive Analysis of Data

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>CROI</i>	150	.2433744	.4758789	-1.022205	4.41021
<i>BND</i>	150	.358467	.2052728	0	.875
<i>BGD</i>	150	.2582724	.1562959	0	.5
<i>BAD</i>	150	2.228221	1.462683	.3636364	7
<i>FSZ</i>	150	7.733534	.6436025	6.240489	8.79331

Source: Stata 14.2 Output (2023)

Table 1 presents the descriptive statistics for the variables in the study. The cashflow return on investment (CROI) has a mean of 0.2434, indicating a positive average return, while the standard deviation of 0.4759 suggests a considerable variability in the data. The minimum CROI is -1.0222, indicating that some firms experienced negative returns, and the maximum is 4.4102, highlighting the presence of outliers. For nationality diversity (BND), the mean is 0.3585, suggesting that, on average, boards are moderately diverse in terms of nationality. The standard deviation of 0.2053 indicates variability in the extent of nationality diversity across firms. Gender diversity (BGD) has a mean of 0.2583, indicating a moderate level of gender diversity on corporate boards, with a standard deviation of 0.1563. Age diversity (BAD) has a mean of 2.228221, suggesting an average board age diversity score of approximately 2.23. The standard deviation of 1.4627 indicates variability in age diversity among corporate board members. Finally, firm size (FSZ) has a mean of 7.7335, indicating that, on average, the listed manufacturing firms in Nigeria are relatively large. The standard deviation of 0.6436 suggests some variability in firm size across the sample, with a minimum of 6.2405 and a maximum of 8.7933. These descriptive statistics helped to provide an understanding of the central tendency and variability of each variable in the study.

4.2 Test of Hypotheses

The hypotheses testing results from the panel-corrected standard errors regression analysis reveal statistically the effect of board diversity on financial performance. PCSE regression method was employed to address the issues of heteroskedasticity and autocorrelation. PCSE corrected for these violations by adjusting the standard errors, leading to more efficient and reliable parameter estimates (Tobechukwu & Azubuike, 2020).

4.2.1 Hypothesis One

H₀: Nationality Diversity has no significant effect on cashflow return on investment of listed consumer goods Firms in Nigeria.

H₁: Nationality Diversity has significant effect on cashflow return on investment of listed consumer goods firms in Nigeria

Table 2 Panel-corrected standard errors regression analysis testing the effect of ND on CFROI

Group variable:	id	Number of obs	=	150	
Time variable:	Year	Number of groups	=	15	
Panels:	heteroskedastic (balanced)	Obs per group:			
Autocorrelation:	panel-specific AR (1)	min =		10	
Avg =	10				
Max =	10				
Estimated covariances	=	15	R-squared	= 0.0627	
Estimated autocorrelations	=	15	Wald chi2 (2)	= 0.85	
Estimated coefficients	=	3	Prob > chi2	= 0.6550	

		Het-corrected			
CROI	Coef.	Std. Err.	Z	P> z	[95% Conf. Interval]
-----+					
BND	-.2556996	.2785403	-0.92	0.359	-.8016286 .2902293
FSZ	-.0015384	.0739624	-0.02	0.983	-.146502 .1434253
cons	.3735994	.6193344	0.60	0.546	-.8402738 1.587473

rhos =	.4127931	.522004	-.0056545	-.2309728	-.32229980414694

Source: Stata 14.2 Statistical Output (2023)

The regression result in Table 2 showed how board nationality aspect of board diversity may impact the financial performance of listed manufacturing firms in Nigeria. The model's overall goodness-of-fit is represented by the R-squared of 0.0627, indicating that approximately 6.27% of the variability in CROI can be explained by BND and the control variable, firm size. The Wald chi-square test, yielding a value of 0.85 with a non-significant p-value of 0.6550, suggests that the model lacks the efficacy to predict CROI. The control variable, firm size (FSZ), with a coefficient of -.0015384, does not exhibit statistical significance in relation to CROI, as indicated by the p-value of 0.983. This suggests that the size of the firm, within the range observed in the study, does not significantly affect cashflow return on investment.

The coefficient of board nationality diversity (BND) is -.2556996, suggesting a negative influence on cashflow return on investment (CROI). This implies that increased nationality diversity on corporate boards might be associated with a decrease in financial performance. However, the non-significant p-value of 0.359 indicates that this relationship lacks statistical significance at 5% significance level.

4.2.1.1 Decision

The Wald chi-square test, yielding a value of 0.85 with a non-significant p-value of 0.6550, is greater than the significance level of 0.05; the null hypothesis is therefore accepted. This shows that Nationality diversity has a negative but non-significant effect on cashflow return on investment of listed consumer goods Firms in Nigeria (p -value = .359).

The negative effect of nationality diversity on CFROI suggests that having a diverse range of nationalities within the leadership may pose challenges to financial performance because of communication barriers, differing business perspectives, or challenges in aligning diverse national backgrounds with the company's strategic goals. Organizations that carefully assess the implications of nationality diversity, considering strategies such as fostering effective communication channels, promoting cultural understanding, and implementing leadership training programs stand a better chance to mitigating this potential adverse impacts on CFROI. Adediran (2023) also found that board nationality negatively affects firm performance. However, this result negates the position of Andoh, Abugri and Anarfo (2023) that board nationality enhances firm performance.

4.2.2 Hypothesis Two

- H_0 : Gender Diversity does not significantly affect cashflow return on investment of listed consumer goods firms in Nigeria.
- H_1 : Gender diversity significantly affects cashflow return on investment of listed consumer goods firms in Nigeria.

Table 3 Panel-corrected standard errors regression testing the effect of GD on CFROI

Group variable:	id	Number of obs	=	150		
Time variable:	Year	Number of groups	=	15		
Panels:	heteroskedastic (balanced)	Obs per group:				
Autocorrelation:	panel-specific AR(1)	min =		10		
Avg =	10					
Max =	10					
Estimated covariances	=	15	R-squared	= 0.0887		
Estimated autocorrelations	=	15	Wald chi2(2)	= 3.08		
Estimated coefficients	=	3	Prob > chi2	= 0.2142		

		Het-corrected				
CROI	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
BGD	.617464	.3521202	1.75	0.080	-.0726789	1.307607
FSZ	-.1012555	.0905719	-1.12	0.264	-.2787732	.0762622
cons	.8794537	.6753267	1.30	0.193	-.4441622	2.20307

rhos =	.7275158	.5036638	.0854669	-.2343897	-.14978950990495

Source: Stata 14.2 Statistical Output (2023)

The regression result in Table 3 shows how gender diversity aspect of board members may impact the financial performance of listed manufacturing firms in Nigeria. The model's overall goodness-of-fit is represented by the R-squared of 0.0887, indicating that approximately 8.87% of the variability in CROI can be explained by BGD and the control variable, firm size. The Wald chi-square test, yielding a value of 3.08 with a non-significant p-value of 0.2142, suggests that the model lacks the efficacy to predict CROI.

The control variable, firm size (FSZ), with a coefficient of -.1012555, does not exhibit statistical significance in relation to CROI, as indicated by the p-value of 0.264. This suggests that the size of the firm, within the range observed in the study, does not significantly affect cashflow return on investment.

The coefficient of board gender diversity (BGD) is .617464, suggesting a positive influence on cashflow return on investment (CROI). This implies that increased gender diversity on corporate boards might be associated with an increase in financial performance. However, the non-significant p-value of 0.080 indicates that this relationship lacks statistical significance at 5% significance level.

4.2.2.1 Decision

By implication, we accept the null hypothesis since the *p*-value is greater than 0.05. This shows that Board gender diversity has a positive but non-significant effect on cashflow return on investment of listed manufacturing Firms in Nigeria (*p*-value = 0.080).

The positive effect of gender diversity on CFROI implies that manufacturing firms in Nigeria may benefit financially from having a more gender-inclusive leadership. This finding aligns with the growing body of research indicating that diverse teams, including gender diversity, often bring a variety of perspectives that can lead to better decision-making and innovation. Thus, organizations achieve better performance when they actively promote gender diversity through targeted recruitment efforts, equal opportunity policies, and initiatives that address gender biases in the workplace. Similar result was also found by Amahalu, Okoye and Nnadi (2023) but Adegboyegun and Igbekoyi (2022) found contrary result.

4.2.3 Hypothesis Three

H₀₃: Age diversity has no significant effect on cashflow return on investment of listed consumer goods Firms in Nigeria.

H₃: Age diversity has a significant effect on cashflow return on investment of listed consumer goods firms in Nigeria.

Table 4 Panel-corrected standard errors regression testing the effect of AD on CFROI

Group variable:	id	Number of obs	=	150		
Time variable:	Year	Number of groups	=	15		
Panels:	heteroskedastic (balanced)	Obs per group:				
Autocorrelation:	panel-specific AR(1)	min	=	10		
avg	=	10				
max	=	10				
Estimated covariances	=	15	R-squared	=	0.0912	
Estimated autocorrelations	=	15	Wald chi2(2)	=	10.80	
Estimated coefficients	=	3	Prob > chi2	=	0.0045	

		Het-corrected				
CROI		Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
-----+-----						
BAD		.0819151	.0301712	2.72	0.007	.0227806 .1410496
FSZ		.1063029	.0687976	1.55	0.122	-.0285379 .2411437
cons		-.7313648	.5435172	-1.35	0.178	-1.796639 .3339092

rhos	=	.0786604	.140345	.4187904	-.1838595	-.2110934 ... -.1664014

Source: Stata 14.2 Statistical Output (2023)

The regression result in Table 4 shows how age diversity aspect of board diversity may impact the financial performance of listed manufacturing firms in Nigeria. The model's overall goodness-of-fit is represented by the R-squared of 0.0912, indicating that approximately 9.12% of the variability in CROI can be explained by BAD and the control variable, firm size. The Wald chi-square test, yielding a value of 10.80 with a significant p-value of 0.0045, suggests that the model has the efficacy to predict CROI.

The control variable, firm size (FSZ), with a coefficient of .1063029, does not exhibit statistical significance in relation to CROI, as indicated by the p-value of 0.122. This suggests that the size of the firm, within the range observed in the study, does not significantly affect cashflow return on investment.

The coefficient of board age diversity (BAD) is .0819151, suggesting a positive influence on cashflow return on investment (CROI). This implies that increased age diversity on corporate boards might be associated with an increase in financial performance. The p-value of 0.007 indicates that this relationship has statistical significance at 5% significance level.

4.2.3.1 Decision

By implication, we accept the alternate hypothesis since the p-value is less than 0.05. This shows that Board age diversity has a positive and significant effect on cashflow return on investment of listed manufacturing Firms in Nigeria (p-value = 0.007).

The positive effect of age diversity on CFROI suggests that having a mix of different age groups within leadership positively influences the financial performance of listed manufacturing firms in Nigeria. A diverse age range can bring a variety of skills, experiences, and perspectives, fostering innovation and adaptability. Organizations capitalizing on the benefits of age diversity tend to encourage mentorship programs, create a culture that values contributions from individuals at different career stages, and ensure that age-related biases do not hinder opportunities for leadership roles. This finding aligns with the results by Roy (2022); Amahalu, Okoye and Nnadi (2023); Martins, Ogundare, Precious and Kelvin (2023) but contradicted the findings by EmadEldeen, Elbayoumi, Basuony and Mohamed (2021).

CONCLUSION AND RECOMMENDATIONS

Board diversity has progressed from a mere ethical consideration to a strategic imperative. Firms worldwide are increasingly recognizing that diverse leadership teams, encompassing various dimensions such as nationality, gender, and age, can have profound implications for financial performance. The present study determined the extent to which board diversity can influence the financial performance of manufacturing firms in Nigeria. The study indicates a negative effect of board nationality diversity on financial performance of listed manufacturing firms in Nigeria, although this effect is non-significant. This finding implies that a higher degree of diversity in terms of nationalities within the corporate leadership of these firms is associated with a decrease in cash flow return on investment, perhaps as a result of challenges in communication, cultural differences, or difficulties in aligning diverse perspectives, which may hinder decision-making processes and overall organizational performance.

Conversely, gender diversity exhibits a positive effect on firm performance, suggesting that firms with a more gender-diverse corporate board experience higher cash flow return on investment, although this effect is non-significant. This re-iterates the potential benefits of gender diversity, such as a broader range of perspectives, improved decision-making processes, and a better understanding of diverse consumer markets. Similarly, age diversity within the corporate board members is associated with a positive effect on firm performance, implying that since a diverse age composition contributes to a dynamic and innovative decision-making environment, there could be better adaptability and resilience in response to changing market conditions. In conclusion, the negative impact of nationality diversity on cashflow return on investment shows the need for organizations to carefully manage the challenges associated with diverse national backgrounds, emphasizing effective communication and cultural alignment.

Based on the findings, the following recommendations have been made:

1. Organizations should carefully evaluate and manage the composition of their leadership teams with regard to nationality. Strategies such as fostering inclusive leadership practices and providing cross-cultural training could be implemented to mitigate potential challenges associated with nationality diversity and enhance overall financial performance.
2. Organizations should implement policies and practices that encourage the inclusion of women in leadership roles, ensuring equal opportunities and addressing any existing gender biases. Creating a more gender-inclusive work environment can contribute positively to financial performance.
3. Consumer goods firms should embrace and value a diverse range of age groups within their leadership teams by encouraging mentorship programs, knowledge sharing between different age cohorts, and fostering a culture that values the unique perspectives of individuals at various stages of their careers can contribute to enhanced financial performance in the manufacturing sector.

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