JOURNAL OF GLOBAL ACCOUNTING
9 (1) April, 2023.
ISSN: 1118 – 6828
https://journals.unizik.edu.ng/joga

FEMALE BOARDROOM PARTICIPATION AND EARNINGS MANAGEMENT OF LISTED MANUFACTURING FIRMS IN NIGERIA

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Key words: *Discretionary Accruals, Earnings Management, Female Boardroom Participation, Female Chief Executive Officer, Female Executive Director, Female Non-Executive Director*

CITATION: Anaike, C.I. & Okegbe, T.O. (2023). Female Boardroom Participation and Earnings Management of Listed Manufacturing Firms in Nigeria, *Journal of Global Accounting*, 9(1), 32 - 75.

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

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ABSTRACT

This study ascertained the effect of female boardroom participation on earnings management of listed manufacturing firms in Nigeria from 2012-2021. Specifically, this study determined the effect of female chief executive officer, female non-executive director and female executive director on discretionary accruals. Panel data were used in this study, which were obtained from the annual reports and accounts of the twenty (21) listed manufacturing firms for the periods 2012-2021. Ex-Post Facto research design was employed. Descriptive statistics of the dataset from the sampled firms was employed to summarily describe the mean, standard deviation, minimum and maximum values of the data for the study variables. Inferential statistics using Pearson correlation coefficient and Panel least square regression analysis were employed to test the hypotheses of the study. The results showed that female chief executive officer has a strong significant but negative effect on discretionary accruals ($\beta 1$ = -0.040633; p-value = 0.0082); female non-executive director has a strong significant but negative effect on discretionary accruals ($\beta 2$ = -2.208115; p-value = 0.0000); female executive director has a strong significant but negative effect on discretionary accruals ($\beta 3$ = -1.159706; p-value = 0.0000) of listed manufacturing firms in Nigeria at 5% level of significance respectively. The study recommended inter alia the recruitment of an ample number of females in the top-notch positions of the board to create a gender-diverse management team to reap the benefits of leadership styles of both genders.

1. INTRODUCTION

Women participation in corporate boards goes beyond concepts of gender diversity, empowerment or inclusion. It is one of the most pertinent strategies for better corporate governance. Diversity can contribute to board effectiveness. Gender diversity is just one component of diversity, and increasing women's participation in the boardroom. While achieving gender balance is imperative, the conversation about diversity is broadening. Companies are increasingly seeking full diversification of their boards, across gender, age, color, and sexual orientation as well as industry experience and disciplinary expertise. Just as it is not optimal to have people on board who are all the same sex or ethnicity. Board members should not all come from the same industry or discipline either. A balanced leadership team with equitable representation of women on board is essential. Gender-diverse boards could lead to informed decision-making and innovative strategies. The participation of women in boards could make a difference. Women juggle roles. Their multi-tasking ability gives them a fairly broad perspective of things. This can be understood in the finer nuances that they bring to the table. Women are more sensitive to social issues ((Mahdi, Al-Absy & Alastal, 2023). Gender diversity can be seen as the process of exploiting diverse characteristics and skills in a man and a woman that could bring benefits to the firm. According to Dutta and Bose (2006), the definition of gender diversity in the boardroom refers to the presence of women as the board of directors which is an important aspect of board diversity. Gender diversity could bring board functioning that eventually could influence firm performance.

The report published by Women in Management, Business and Public Service (WIMBIZ) a Non-Governmental Organisation (NGO) in Nigeria, estimates that only 10.5 per cent of board seats were held by women in Nigeria (WIMBIZ, 2011). Various countries are also making mandatory requirements for female boardroom participation in the corporate boardroom. For instance, Norway requires 40% of female boardroom representation, Spain requires 40% female boardroom representation and Sweden requires 25%. The EU recently proposed a female board representation of 25% for large listed firms (Terjesen, Sealy, & Singh, 2009; Terjesen &Sealy 2016). According to WIMBIZ (2021), in Nigeria with an estimated total population of 200 million and a female population of 101 million, the imperative for gender parity in the country has reached a crescendo. The figure below shows the representation of females by region in senior management positions globally.

The remarkable growth in the African continent was mainly attributed to countries such as Rwanda and South Africa which increased female representation in middle-management by 27% in Rwanda and 15%in South Africa between 2015 and 2018 (McKinsey, 2019). However, in contrast, the situation varies in Nigeria which is stifled by the "glass ceiling" problem as the majority of women fall below the senior management level and are often found in the informal sector with meagre incomes (Ogbonna, 2016; WIMBIZ, 2021). The literature has shown support for female participation as they bring along a broad range of knowledge and opinions than previously available in male-dominated boardrooms (Bernardi & Threadgill, 2011; Davies Report, 2011). The evidence supports that gender-diverse boards also consider the needs of a wider stakeholder group than homogenous boards (Konrad & Kramer, 2006).

Recently, the twin issue of female boardroom participation and earnings management are among the most widely debated topics in corporate governance research. (Arun, Almahrog & Aribi, 2015). Managers want the financial statements to look good for investors and lenders. As such, they influence company earnings reported in financial statements to promote investor confidence and attract more capital. Earnings management is the act of intentionally influencing the process of financial reporting to obtain some private gain. It involves the alteration of financial reports to mislead stakeholders about the organisations underlying performance or to influence the contractual outcomes that depends on reported accounting numbers. In most cases, the strategy is executed by taking advantage of accounting rules to inflate the net income (profits). This way, company management smooths earning fluctuations and promotes the image of steady gains. If company earnings meet investor expectations, the stock price is more likely to rise. Nigeria remains predominantly behind most western countries such as the US and Germany in gender parity, with weak regulatory institutions and strong cultural bias against women (WIMBIZ, 2021). Hence, the need to see the proportion of women serving on boards grow and the concept of diversity evolve to encompass distinct and vibrant streams of thought. Besides, having many perspectives is fast-becoming an essential requirement for board effectiveness. It is against this backdrop, that this study sought to determine the effect of female boardroom participation on earnings management of listed manufacturing firms in Nigeria.

Female boardroom participation in Africa companies has been low compared to firms in their developed countries. The African CEO forum (2017) observed that gender diversity in Africa is slowing growing at an annual rate of 20%. They further noted that one crucial challenge faced by most women in the region is balancing professional and personal life. This is referred to as "double burden syndrome" (Africa CEO Forum, 2017). Globally, Nigeria has the lowest number of female parliamentarian in sub-shara Africa and ranks 133rd in the world for female political representation (Ogbonna, 2016). Strong leadership is needed to change the board's composition. This guidance could come from the chief executive officer (CEO), chair, lead director, and/or committee chairs, but in the end, the poser still remains: Why are women the minority outlier here? And, is the board taking appropriate action to help the company move forward by having varied perspectives in the boardroom? In today's environment, there are a great deal of women and other minorities who are qualified to serve on boards. But, without leadership who is willing to engage and be sincere about the search, boards can quickly back themselves into a corner by approaching the same handful of board-experienced candidates who may not have the capacity to take on other directorships – or even worse, to default to the reflex response that there just are not enough good women or minority candidates available.

An issue may arise on the reasons that lead to the lack of women involvement in the board of directors. One of the reasons is due to the cultural and social attitudes towards what job is suitable for women and men. Women might be stereotyped in some industry. The ability of women to manage the organization is questioned due to the perception of their characteristics that are believed to be emotional, meticulous and fussy. Even, the glass ceiling factor is said to be one of the concern of woman underrepresentation at decision making level. Furthermore, some argued that women may recede from competition for promotions or choose to stay away from the stress and work-life imbalance associated with occupying the executive office suite that lead to the problem in supply. Another reason lies on the limitation of women expertise in a particular field of business that consequently limit women's opportunity to move the ladder.

Despite that the extant literature in developed nations attests to the increasing importance of gender mix (Zhou, Owusu-Ansah, Maggina, 2018), little attention is given to its significance in developing and emerging countries (Githaiga, Kabete & Bonareri, 2022). Also, the few studies on the impact of female boardroom participation on a firm's performance exert mixed results. Durana, Blazek, Machova and Krasnan (2022) revealed that female board participation enhances a firm's performance, whereas, on the contrary, Post and Byron (2015); Michalkova, Stehel, Nica and Durana (2021) noted an insignificant impact. On the other hand, a negative relationship was reported by Love, Lim and Bendar, (2017). The varied result obtained from the reviewed literature created a lacuna which this study tends to fill. In order to close the variable gap, this study focused on earnings management contrary to prior studies that predominantly focused on financial performance, hence, the need for this study.

1.1 Objectives of the Study

The main objective of the study is to ascertain the effect of female boardroom participation on earnings management of listed manufacturing firms in Nigeria. The specific objectives of the study are to:

1. Determine the effect of female chief executive officer on discretionary accruals of listed manufacturing firms in Nigeria.
2. Examine the effect of female non-executive director on discretionary accruals of listed manufacturing firms in Nigeria.
3. Investigate the effect of female executive director on discretionary accruals of listed manufacturing firms in Nigeria.

1.2 Hypotheses

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i. Ho: Female chief executive officer has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

ii. Ho: Female non-executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

iii. Ho: Female executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual review

2.1.1 Female Boardroom Participation

Female Directors are elected women on board that represent shareholders. Female directors are also responsible for helping a corporation set broad goals, supporting executive duties, and ensuring the company has adequate, well-managed resources at its disposal (Al-Absy, 2022). Boards guide the success or failure of a company by steering the overall corporate direction, setting policies, choosing executives, and ensuring that major decisions are ethical and prudent. They make a commitment to building the mission and vision of the company, ensuring that it is carried through all areas of the organization. Board gender diversity is a significant aspect of corporate governance, it is defined as the presence of female directors on the board of directors of corporations (Zalata, Tauringana & Tingbani, 2018).

Companies with high female representation on their boards tend to have stronger corporate governance than those with few or no women on the board of directors and consider the needs of a wider range of stakeholders than male directors (Orazalin, 2020). The study also found that boards with three or more women were significantly more likely to have a conflict of interest guidelines and company codes of conduct than all-male boards. Boards with female directors also tend to use more non-financial performance measures (such as innovation and social responsibility) to evaluate their companies than their all-male counterparts (Mahdi, Al-Absy & Alastal, 2023). Having women in key positions is argued to be associated with long term company success and competitive advantage, adding value through women's distinctive set of skills and creating cultures of inclusion through a diverse workforce (Githaiga, Muturi-Kabete, Caroline-Bonareri & Ntim, 2022; Mnif & Cherif, 2020). The presence of female directors at the corporate board was measured by the percentage of women directors. The percentage of women directors was calculated by the number of female directors on the company board divided by board size.

2.1.2 Female Chief Executive Officer

A chief executive officer (CEO) is the highest-ranking executive in a company. A chief executive officer's primary responsibilities include making major corporate decisions, managing the overall operations and resources of a company, acting as the main point of communication between the board of directors and corporate operations. The CEO is elected by the board and its shareholders. They report to the chair and the board, who are appointed by shareholders (Hayes, 2022). The chief executive officer (CEO) plans out a company's overall strategies and policies. This includes responsibility for all components and departments of a business. The CEO also ensures that the organization's leadership is constantly aware of key external and internal factors (Drury, 2022). The CEO is also expected to balance the needs of customers, employees, investors, and other shareholders. It is the CEO's job to ultimately make sure things run smoothly, and they are often the face of the company when it becomes of public interest. They represent the business (Velasquez, 2022).

The growing number of female CEOs (FCEOs) around the world indicates the significance of female leadership. The performance of FCEOs has been widely studied because of their unique characteristics for example, risk aversion, conservative decision making, less overconfidence, and efficient monitoring (Heathfield & Rubin, 2022; Stevenson & Orr, 2022).). These studies note that females in the top echelons of the corporate domain affect corporate decisions and corporate behavior differently from their male counterparts (Hussain, Tian, Ashraf, Khan & Ying, 2022).

Female leaders are associated with better corporate governance and financial performance than male CEOs (Mukherjee & Sen, 2022). Female CEOs are different from males CEOs in their influence on financial reporting (Wei, Ouyang & Chen, 2018), stock price informativeness (Vaish & Daruwala 2021), agency conflict (Ernestine & Setyaningrum, 2019), and company acquisitions (Kong, Famba, Chituku-Dzimiro, Sun, & Kurauone, 2020).

2.1.3 Female Non-Executive Director

Non-executive director (NED) refers to a member of a company's board of directors. This board member is not a company employee, which means they do not engage in the day-to-day management of the organization (Collier, 2017). Non-executive directors are people who sit on boards to provide an ‘outsider’s’ view of a company’s strategy. Non-executive directors (NEDs) do not work full-time for the organisation they advise. Companies hire non-executive directors to provide an alternative opinion or insight that can help with business decisions, company culture and strategy. Non-executive directors are often called ‘critical friends’ to the CEO and the board, they usually have some professional skills that a board needs such as in the areas of digital transformation, cybersecurity, human resource or finance (Conmy, 2022).

Non-executive directors (NEDs) are asked onto a board specifically to provide an independent, impartial point of view in the best interests of the company, its stakeholders, and employees. They question and monitor the decision-making of CEOs and senior executives and can act as an invaluable mentor and pillar of support. Non-executive directors are there to provide independent and broad-thinking governance. They are not there to carry out the nitty-gritty of managing a company (Schwarz, 2022). Female Non-Executive Directors are rare and yet the value they can bring to an organisation, is a balanced and diverse influence and perspective. They can offer this more than an employee, because unlike full-time or part-time executive board members, they act in an independent advisory role. One way organisations can quickly bring the benefits of female influence and perspective to a board, is to hire a female non-executive director (Chatterjee & Nag, 2022). Effective non-executive directors (NEDs) are able to constructively challenge the status quo of an organisation, they bring the outside in and offer fresh perspectives on business challenges. For this reason, NEDs are a vital component of any board of directors and talented operators are always in demand (Arvanitis, Varouchas & Agiomirgianakis, 2022).

2.1.4 Female Executive Director

An executive director is a member of the board of directors of a company who is also an employee (usually full-time) of that company and who often has a specified area of responsibility, such as finance or production (Downey, 2022). The executive director oversees a company or nonprofit's board of directors, and is responsible for leading the organization. Executive directors work with the board of directors to ensure they are well-equipped to meet the organization's goals (Miller, 2022). The board of directors of a firm play important roles in determining a firm’s strategic directions and disclosure decisions. Women make up of at least half of the human capital in any nation. By including women into corporate boardrooms, it enables firms to tap into a pool of talent which women can contribute (Ratnawati, 2019). According to Jyothi and Mangalgiri (2019), a heterogeneous group of decision makers can enhance competitiveness of a firm in an industry and produce effective decisions for a firm as the inclusion of non-traditional members in a board can tackle the issue of group-think that normally happens in a homogeneous board. The inclusion of women directors can broaden the perspective of a board of directors to facilitate decision making and respond to demands of a diverse group of stakeholders (Kumar, Nigam & Singh, 2020; Garcia, Llorence & Meca, 2020).

2.1.5 Earnings Management

Earnings management is a strategy used by the management of a company to deliberately manipulate the company's earnings so that the figures match a pre-determined target. Earnings management refers to a company's deliberate use of accounting techniques to make its financial reports look better. Earnings management can occur when a company feels pressured to manipulate earnings in order to match a pre-determined target (Anderson, 2021). Earnings management is a practice followed by the management of a company to influence the earnings reported in financial statements. It is executed to match a set target and is different from managing the underlying business of the company. An earnings management strategy uses accounting methods to present an excessively positive view of a company’s financial positions, inflating earnings (Gajdosikova, Valaskova & Durana, 2022).

Earnings management is the use of accounting trickery to make a company’s financial results appear better than is really the case. This is done by taking advantage of the accounting standards to either inflate a firm’s reported profits or to make these figures look less variable. Earnings management is especially common in publicly-held companies, because their investors base their stock valuation analyses on a reliable track record of consistent increases in earnings. The requirements of management's bonus plans can also drive them to manage earnings, in order to maximize their bonus payouts (Valaskova, Adamko, Michalikova & Macek, 2021).

2.1.6 Discretionary Accrual

An accrual is a record of revenue or expenses that have been earned or incurred, but have not yet been recorded in the company's financial statements. This can include things like unpaid invoices for services provided, or expenses that have been incurred but not yet paid (Tuovila, 2022). Accruals are important because they help to ensure that a company's financial statements accurately reflect its true financial position, even if it has not yet received payment for all of the services it has provided or paid all of its bills (Drury, 2022). Discretionary Accrual is a non-mandatory expense/asset that is recorded within the accounting system that has yet to be realized. An example is management bonus (Bushee, 2023). Discretionary accrual is the amount of asset or liability that is not mandatory but is recorded in the system and that would be realized later when settled (Ittner, 2023).

The study employs the Modified Jones Model (MJM) (Dechow, Sloan, & Sweeney, 1995) to estimate current discretionary accruals.MJM subtracts the change in receivables (ΔREC) from change in revenues (ΔREV); in order to exclude the element in the change in revenuethat is expected to be managed through managerial discretion. The following cross-sectional regression equation is used to estimate currentaccruals.

$TAit = \alpha_0\ 1 + \alpha_1\Delta REVit – \Delta RECit + \alpha_2 PPEit + \varepsilon it$..............Eq. 1

Ait-1 Ait-1 Ait-1

Where:

TAit - Total Accruals in year t

Ait-1 - Total Assets in year t -1

$\Delta RE_{V}it$ - Annual change in revenues in year t

ΔRECit - Annual change in receivables accounts in year t

PPEit - Gross property, plant and equipment in year t

εit - The error term

The residual of Eq. 1 above, is Discretionary Accruals (DA).

2.1.7 Female Chief Executive Officer and Earnings Management

Studies have shown that female directors are more ethically sensitive and empathetic to corporate social responsibility issues and environmental politics (Nagy & Valaskova, 2022). Females are more risk-averse and better at providing voluntary information to reduce information asymmetry between female directors and managers (Xu, Zhang, Hao & Guo, 2021). Studies present mixed findings on the effect of female directors on several corporate firm attributes.Cumming, Leung, and Rui (2015) showed that as female boardroom representation increased, the level of corruption in the sampled firms declined. Barua, Davidson, Rama, and Thiruvadi (2011) found that firms with female CFOs have lower discretionary accruals than firms with male CFOs. Peni and Vähämaa (2010) found that firms with female CFOs have income-decreasing discretionary accruals, indicating that female CFOs are following more conservative financial reporting rules and standards. However, they reported no association between earnings management and CEO gender.

Ibrahim, Angelidis, and Tomic (2009) showed that female managers tend to exhibit more positive attitudes toward the adoption of an ethics code in their organization. In contrast, Rodriguez-Dominguez, Gallego-Alvarez, and Garcia-Sanchez (2009) found no relationship between the proportion of women and corporate ethics. In conclusion, the literature documents mixed findings on the subject. In contrast, Gavious, Segev, and Yosef (2012) found that firms with female CEOs have fewer earnings management than those with male CEOs, i.e., a negative relationship between female executives and earnings management. Instead, Hili and Affes (2012) found no association between earnings management and the presence of female directors on boards and audit committees in France and the US.Krishnan and Parsons (2008) found that earnings management is higher for firms with more female directors. Sun, Liu, and Lan (2011) found no evidence of the impact of female boardroom representation on audit committees and earnings management; while Thiruvadi and Huang (2011) found that the presence of female directors on the audit committee is negatively related to earnings management.

2.1.8 Female Non-Executive Directorship and Earnings Management

A non-executive director is a director who is not employed in the company's business activities and whose role is to provide an outsider's contribution and oversight to the board of directors (Vagner, Valaskova, Durana & Lazaroiu, 2021). A non-executive director who is entirely independent of management is expected to offer shareholders the greatest protection in monitoring management (Hussain, Akbar, Kaleem-Khan, Akbar, Panait & Catalin Voica, 2020). Durana, Valaskova, Siekelova and Michalkova (2022) posit that the superior monitoring ability of non-executives can be attributed to the incentive to maintain their reputations in the external labour market. The appointment of outside (non-executive) directors is an effective corporate governance mechanism to reduce agency problems and improve earnings quality (Bilan, Mishchuk, Samoliuk & Mishchuk, 2020). Studies by Khosa (2017), Deloitte (2018) and Abdullah, Ku-Ismail and Nachum (2015) show that board's greater independence is associated with a higher quality of accounting information.

2.1.9 Female Executive Director and Earnings Management

Arguably, improving financial reporting quality is partially dependent on directors' financial background (Li, Mangena, & Pike, 2012). It is therefore expected that female directors with professional financial qualification and experience should better monitor the management and also demand a higher degrees of accountability from CEOs (Gul, Srinidhi, & Ng, 2011).Sun, Liu, and Lan (2011) find that gender diversified audit committees do not constrain earnings management. Srinidhi, Gul, and Tsui (2011) find that firms with gender diversified audit committees have higher earnings quality. This is consistent with Zalata et al. (2019b) that finds that firms with female directors have an earnings quality.

The financial experience of female directors enables them to handle complexities, estimates and financial reporting decisions, and understand auditors' judgment (Al Lawati,Hussainey, & Sagitova, 2021; DeZoort & Salterio, 2001; Faleye,Hoitash, &Hoitash, 2018; Mangena & Pike, 2005; Zhang, Zhou, & Zhou, 2007; Li, Mangena, & Pike, 2012). The studies by Xie, Davidson, and DaDalt (2003), Abbott, Parker, and Peters (2004), Bedard, Chtourou, and Courteau (2004), Dhaliwal, Naiker, and Navissi (2010), Badolato, Donelson, and Ege (2014) find that firms with more outside directors possessing relevant financial background are characterized by less earnings management and less probability of financial reporting restatement.

2.2 Theoretical Review

The study is anchored on two theories; first, the 'resource dependence theory', which explains the board's ability to connect the firm with external factors by co-opting the resources needed to survive. In this regard, the theory focuses on the importance of external linkages and networks of firms to enhance their interests and benefits (Pfeffer & Salancik, 2003). Secondly, the 'agency theory', which relates to the notion of human beings as self-interested participants, such that in any contractual relationships in which the parties have different goals and risk preferences, the agent may pursue self-serving behaviour (Eisenhardt, 1989). The theory has been widely used in the context of corporate governance as it relates to the modern corporation. The two theories are inextricably linked to explain the nexus of female boardroom participation and earnings management in corporate organisations.

2.2.1 Resource Dependence Theory

The theory was developed by the works of Pfeffer and Salancik (1978) and Zahra and Pearce (1989). Resource dependency theory derives from economics and sociology disciplines concerned with the distribution of power in the firm (Chambers, Harvey, Mannion, Bond, & Marshall, 2013). The basic proposition of resource dependence theory is the need for environmental linkages between the firm and outside resources. The theory provides a theoretical foundation for the role of the board of directors to connect the firm with external factors by co-opting the resources needed to survive (Diepen, 2015; Johnson, Daily, & Ellstrand, 1996). The emphasis is on a firms' ability to form "links to secure access to critical resources such as capital, customers, suppliers, or cooperative partners" (Randøy, Thomsen, & Oxelheim, 2006). In this regard, corporate boards are considered a link between the firm and the essential resources that a firm need from the external environment for superior performance. Boards that are diverse in "ethnicity, gender, experience, education and background possess a considerable range of different knowledge and skills" (Thomsen & Conyon, 2012). According to Mintzberg (1983), the board is a mediator between internal and external coalitions, facing into management and out to shareholders. The use of the board as a co-optative mechanism (also known as co-optation theory) reflects the potential of the board in fostering long-term relationships with key external constituencies, thereby co-opting important elements of the organisation's external environment (Chambers, Harvey, Mannion, Bond, & Marshall, 2013).

Resource dependency theory suggests that directors bring various resources, such as; information, skills, knowledge, key constituents (suppliers, customers, public policy decision-makers, and social groups) and legitimacy that reduce uncertainty, which in turn reduces transaction costs (Pfeffer & Salancik, 2003; Kesner & Johnson, 1990). Boards specifically bring along four benefits, which includes: advice, access to information, preferential access to resources and legitimacy (Huse, 2005). According to Carter, Simkins and Simpson (2003), Females are better at building relations with other actors such as employees, host communities and government beacuse of their less aggressive dispositions. They are generally inclined towards soft and societal demands while male focus on hard and quantifiable issues (economic dimensions) (Galbreath, 2011: Huse & Solberg 2006).

2.2.2 Agency Theory

The theory was developed from the works of Jensen and Meckling (1976). The agency theory paradigm was first formulated by Ross in the '70s (Ross, 1973). The term was first associated with agency costs by Jensen and Meckling in 1976 (Ross, 1973; Jensen & Meckling, 1976; Shapiro, 2005). Rooted in information economics (Turnbull, 1997), agency theory complements the risk-sharing literature by addressing the agency problem that occurs when the goals of cooperating parties differ (Ross, 1973; Jensen & Meckling 1976). According to Jensen and Meckling (1976), an agency relationship is a “contract under which one or more persons (the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”.

Agency theory tries to resolve two problems that usually occur when one party (the principal) delegates work to another (agent). The first is the conflict of goals between the principal and agent and the costs associated with the minimisation of such discrepancy; and, secondly, is the problem of sharing risk when the risk preference of the principal and agent differs (Eisenhardt, 1989). According to Davis, Schoorman, and Donaldson (1997) agency theory provides “a useful way of explaining relationships where the parties' interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system”.According to Lopes (2016), the agency conflict is exacerbated by the problem of information asymmetry. Eisenhardt (1989) outlined two streams of the theory which developed over time: the principal-agent where both act in concert and the positivist perspective where they are likely to have conflicting goals. She further explained that the agency problem arises when “(a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is doing”. The theory rests on several assumptions, including human assumptions, of self-interest, bounded rationality and risk aversion; organisational assumptions, of partial goal conflict among participants, efficiency as the effectiveness criterion and information asymmetry between principal and agent; and, information assumptions, on information as a valuable commodity.

The information asymmetry problem embedded in the principal-agency relationship may result in moral hazard and adverse selection and precludes cooperative parties from the benefits of sharing risks. Managers can play an important role in improving the value of a firm. They can reduce the agency cost in a firm by decreasing the information asymmetry, which results in improving the value of a firm (Monks & Minow, 2001). Agency theory may be applied to any contractual relationships in which the principal and agent have partly differing goals and risk preferences, for example, compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, merge & acquisition, and transfer pricing (Eisenhardt, 1989). Hart (1995) believes that the subject of corporate governance arises when two conditions are combined. First, there is an agency problem, or conflict of interest involving members of the organization. Secondly, transaction costs are such that this agency problem cannot be dealt with through a contract. Financial markets capture these agency costs as avalue loss to the shareholder (McColgan, 2001; Ruangviset, Jiraporn, & Kim, 2014).

2.3 Empirical Review

Kontesa, Chai, Brahmana, and Contesa (2020) conducted a study titled 'Do female directors manipulate earnings'. The sample comprised 263 firms listed in Bursa Malaysia. The authors employed secondary data from annual financial reports from 2013 to 2017. The data were analysed using the multiple regression technique. The results showed that female directors have a positive effect on earnings management.

Mnif and Cherif (2020) investigated the impact of female board directorship on earnings management in France. They used a sample of 198 firm-year observations listed on the SBF 120 from the period 2010 to 2018. The study relied on secondary data analysed using the multiple regression technique. The empirical results showed that female board participation reducesthe level of earnings management.

Arioglu (2020) examined affiliations and characteristics of female directors and earnings management in Turkey. The author utilised secondary data from financial statements of all non-financial companies listed on the Borsa Istanbul from the period 2009 to 2017. The data was analysed GMM method. The results showed that the presence of female directors was not associated with earnings management. The results were also consistent for the percentage of female directors with specific attributes such as busyness, professional expertise and audit committee membership. The results suggest a negative (positive) relationship between the percentage of female directors that are affiliated (unaffiliated) with controlling business groups and earnings management.

Harakeh, El-Gammal, and Matar (2019) examined the moderating effect of female directors on the association between earnings management and CEO incentive compensation in the UK. They used a difference-in-differences methodology and hand-collected data from the FTSE350 UK public companies between 2007 and 2015. The results showed a positive association between earnings management and CEO incentive compensation, and a negative association between female directors and earnings management. The main finding is that female directors play a moderating role on the association between earnings management and CEO incentive compensation.

Gull, Nekhili, Nagati, and Chtioui (2018) conducted a study titled 'Beyond gender diversity: How specific attributes of female directors affect earnings management'. The sample comprised 394 firms listed on the Euronext Paris CAC All-shares Index. The secondary data was retrieved from Thomson Datastream from 2001 to 2010. The data were analysed using the system GMM regression estimation technique. The results showed a negative relationship between female directors and earnings management. The percentage and number of female directors also have negative effect on the earnings management proxy.

Anazonwu, Egbunike, and Gunardi (2018)investigated the influence of corporate board diversity on sustainability reporting in Nigeria. The sample comprised 43 firms from the conglomerates, consumer goods, and, industrial goods sectors. They employed secondary data, extracted from annual financial reports. The data were analysed using the fixed effects panel regression to test the hypotheses. The study found a significant positive influence of the proportion of women directors on sustainability reporting.

Gordini and Rancati (2017) investigate gender diversity and firm financial performance in Italy. They used a sample of 918 Italian listed companies and secondary data from annual financial statements from 2011 to 2014. The data were analysed using the multiple regression technique. The study found that gender diversity, measured by the percentage of women on a board and the use of Blau and Shannon indices, had a significant positive effect on Tobin's Q, while the presence of one or more women on the board per se has an insignificant effect on firm financial performance.

Wei, Ding, and Kong (2017) explored the relationship between female directors and corporate social responsibility in China. The sample comprised 199 listed companies from Shanghai and Shenzhen stock markets. The study relied on secondary data from 2008 to 2015. The data were analysed using the multiple regression technique. The results found support for the critical mass theory, that is, as the number of female directors reaches at least 3, there is a significant positive impact on the level of corporate environmental investment.

Phua and Ho (2017) examined the role of female directors on corporate environmental disclosure in Malaysia. The sample comprised 260 Malaysian listed companies in 2013. Content analysis was used to gauge the extent of corporate environmental disclosure; while, multiple regression was used to test the hypotheses. They found that female directors, females with multiple directorships and female independent non-executive directors had a positive effect on corporate environmental disclosure. However, the latter was not significant in the OLS result.

Ong and Djajadikerta (2017) examined the impact of corporate governance on sustainability reporting by companies in Australia. The sample comprised firms in the resources industry. The sudy collected data using content analysis for the year 2012. The data were analysed using Kendall's tau-b and Mann-Whitney U tests. The results showed a positive correlation between the proportion of women directors on the board and total sustainability disclosure, economic disclosure, environmental disclosure, and social disclosure.

Nekhili, Nagati, Chtioui, and Nekhili (2017) examined the influence of a gender-diverse board on voluntary CSR reporting in France. The sample comprised listed companies in the SBF 120 index from 2001 to 2011. They controlled for differences in firm characteristics between firms with and without female board members using propensity score matching. They find that engaging an external assurance provider for CSR reporting is value relevant for firms without female directors but not value relevant for firms with female directors.

Modiba and Ngwakwe (2017) examined the relationship between greater female participation in the board of directors and sustainability disclosure. The sample comprised five companies selected from the Socially Responsible Investing Index (SRI) of the Johannesburg Stock Exchange (JSE) from 2010 to 2014. They used panel regression to test the hypotheses. The study found a significant positive effect of women on the board on energy and social investment disclosure at the 0.05 significance level.

Mahmood and Orazalin (2017) examined the relationship between corporate board characteristics and sustainability reporting in Kazakhstan. The sample comprised the top thirty oil, gas and mining companies listed on the Kazakhstan Stock Exchange (KASE). Secondary data was collected from annual reports, investment memorandums, sustainability reports, and corporate social responsibility (CSR) report. The results showed that the most significant board characteristics were, board size and gender diversity in determining the scope and quality of sustainability information.

Yasser, Al Mamun, and Ahmed (2017) examined the relationship between board gender diversity and corporate social performance of firms in three Asia Pacific countries (Malaysia, Pakistan, and

Thailand). The data were analysed using the multiple regression technique. The results showed a significant relationship between board gender diversity and CSP in the countries.

Ben-Amar, Chang, and McIlkenny (2017)investigated the effect of female representation on the corporate response to sustainability initiatives. The sample comprised 541 firm-year observations of listed Canadian firms over the period 2008 to 2014. They establish that the likelihood of voluntary climate change disclosure increases with women percentage on boards.

Yaroson and Giwa (2016) investigated the effect of female directors on corporate social responsibility in Nigeria. They used a sample of 7 conglomerates listed on the Nigerian Stock Exchange from 2005 to 2014. The correlation results showed a positive relationship between the proportion of female directors and corporate social responsibility. The regression results showed a significant positive effect onthe proportion of female directors on CSR.

Arayssi, Dah, and Jizi (2016) investigated the effect of gender-diverse boards on the association between sustainability reporting and shareholders' welfare. The sample comprised all listed firms in the Financial Times Stock Exchange 350 index from 2007 to 2012. They applied a panel data regression model. The results revealed that the presence of women directors on corporate boards favourably influences a firm's risk and performance through promoting a firm's investment in effectual social engagements and reporting on them.

The study by Al-Shaer and Zaman (2016) examined the effect of board gender diversity on sustainability reporting quality. They found that gender-diverse boards were associated with higher quality sustainability reports; and, that independent female directors have a greater effect than female directors on sustainability reporting quality.

Glass, Cook, and Ingersoll (2016) investigated the impact of female directors on the corporate environmental strategies of organizations. The sample comprised of all Fortune 500 firms from 2001 to 2010. They used the KLD Stats measures of environmental strengths and environmental weaknesses. The secondary data were analysed using binomial regression. The results showed that women CEOs are positively related to environmental strengths and negatively related to environmental concerns but not significant; and, that as the number of women on the board increases there is a corresponding increase in environmental strength; and, a trend only of decreased environmental concerns as the number of women on the board increases. The number of interlinks is positively and significantly related to environmental strengths; however, this was not significant for environmental concerns.

Arun, Almahrog, and Aribi (2015) investigated the relationship between female directors and earnings management in the UK. The final sample comprised of 1,217 firm-year observations from the UK FTSE 350 index. The study utilised secondary data from three sources: FAME, Thomson One Banker, and annual reports for the period 2005-2011. The data were analysed using the multiple regression technique. The results showed that the number of female directors and the number of independent female directors on the board had a positive significant effect on earnings management; however, the gender of the CFO had a positive non-significant effect on discretionary accruals. The findings were also consistent using the Jones Model. Additional analysis also revealed that the number of females and independent females on the board in high-debt firms have a non-significant positive effect on earnings management; while, in low-debt firms, had a positive significant relationship.

Handajani, Subroto, Sutrisno, and Saraswati (2014) examined the effect of board diversity on corporate social disclosure. The sample comprised public firms listed on the Indonesia Stock Exchange that disclose corporate social responsibility information. They used multiple regression analysis. The results showed that board gender had a significant negative effect on corporate social disclosure.

Fernandez-Feijoo, Romero, and Ruiz-Blanco (2014) explored the relationship between the presence of at least three women on the board and sustainability reporting. The results showed countries with at least three women had higher levels of sustainability reporting. Also,those countries with higher gender equality have more companies with boards of directors of at least three women.

Frias-Aceituno, Rodriguez-Ariza, and Garcia-Sanchez (2013) examined the role of the board in the dissemination of integrated corporate social reporting. The sample comprised 568 companies from 15 countries, for the period 2008 to 2010. The results showed that gender diversity was among the most influential factors in the dissemination of integrated corporate social reporting.

Zhang, Zhu, and Ding (2013) examined the effect of board composition on corporate social responsibility (CSR) in the post-Sarbanes-Oxley period in the U.S. The sample comprised 516 firms in 64 industries, which covered U.S. and international firms listed on the U.S. stock exchanges. The study found that the presence of women directors leads to better CSR performance within a firm's industry.

Rupley, Brown, and Marshall (2012) examined the influence of governance, media on the quality of environmental disclosure. The sample comprised 127 U.S. firms across five industries (chemical, oil and gas, electrical utilities, pharmaceutical and biotech, and food and beverage) over six years (2000-2005). The results showed a significant positive relationship between voluntary environmental disclosures and the proportion of women directors.

Similarly, in Australia, Rao, Tilt, and Lester (2012) examined the relationship between 2008 annual reports of the 100 largest Australian companies listed on the Australian Securities Exchange (ASX). The results showed a positive relationship between board independence and the proportion of women directors and environmental disclosure.

Bernardi and Threadgill (2011) examined the association between female directors and corporate social responsibility.The sample comprised 143 companies included in Fortune 500 for three years. The study results confirm the presence of an association between the number of female directors and corporate social behaviour including charitable giving, community involvement, and outside recognition of employee benefits.

Sun, Liu, and Lan (2011) examined whether female directorship on independent audit committees constrains earnings management. They used a sample of 525 firm-year observations from the period 2003 to 2005. The study utilised secondary data which was analysed using multiple regression technique. The results showed that the proportion of females on the audit committee was not associated with earnings management.

Galbreath (2011) investigated the link between women on boards of directors and corporate sustainability. The sample comprised 151 publicly listed firms on the Australian Securities Exchange. He employed regression in testing the hypotheses. The results showed that the proportion of women had a significant positive effect on ROE and M/B, but not on ROA. However,the proportion of women had a negative and non-significant effect on the environmental dimension; but, a positive significant effect on the social dimension.

Empirically, Gul, Srinidhi, and Ng (2011)investigated the effect of board gender diversity on the informativeness of stock prices. The authors utilised secondary data which was analysed using multiple regression technique. The results showed that stock prices of firms with gender-diverse boards reflect more firm-specific information after controlling for corporate governance, earnings quality, institutional ownership and acquisition activity. The results were also sensitive to several robustness tests.

Despite that the extant literature in developed nations attests to the increasing importance of gender mix (Angelo, Sullivan & Shi, 2019), little attention is given to its significance in developing and emerging countries (Perafan-Pena, Gill-De-Albornoz & Giner, 2022). Also, the few studies on the impact of female boardroom participation on a firm's performance exert mixed results. Gavana, Gottardo & Moisello, (2022). revealed that female board participation enhances a firm's performance, whereas, on the contrary, Michalkova, Stehel, Nica and Durana (2021); Li, Hang, Shah, Akram and Ozturk (2020) noted an insignificant impact. On the hand, a negative relationship was reported by Tiago, Barros and Serra (2022).

The varied result obtained from the reviewed literature created a lacuna which this study tends to fill. In order to close the variable gap, this study focused on earnings management contrary to prior studies that predominantly focused on financial performance, hence, the need for this study.

3. MATERIAL AND METHOD

This study adopted the ex post facto research design. The ex-post facto design seeks to reveal the effects by observing an existing condition or state of affairs and searching back in time for plausible contributing factors (Trochim, 2006). The population of the study is made up of the manufacturing firms quoted on the floor of the Nigerian Exchange(NGX) Group as at end of the 2021 financial year. The population of the study was drawn from the following sectors: Agriculture; Consumer goods; Conglomerates; Healthcare; ICT; and, Industrial Goods (NSE, 2020). The table below shows the number of companies included from the various sectors:

Table 1: Distribution of Companies by Sector

S/No	Sector	Number of firms
1	Agriculture	5
2	Consumer Goods	22
3	Conglomerates	6
4	Health Care	11
5	ICT	7

6	Industrial Goods	15
	Total	66

Source: The Nigerian Exchange Group Website (2023)

The study used purposive sampling technique; and, the sample for the study comprised twenty one (21) manufacturing companies classified under the Conglomerates, Consumer goods, and, Industrial Goods sector of the Nigerian Exchange Group. The reason for selecting from this part of the population is that these are the sectors that covers the main drivers of the economy and variations in these sectors clearly reflects on the economy.

Table 2: Selected companies for the study

S/No	Name of Company	Sector
1.	Chellarams Plc	Conglomerates
2.	John Holt Plc	Conglomerates
3.	SCOA Nigeria Plc	Conglomerates
4.	Transnational Corporation Plc	Conglomerates
5.	Dn Tyre & Rubber Plc	Consumer Goods
6.	Guinness Nigeria Plc	Consumer Goods
7.	Nigerian Breweries Plc	Consumer Goods
8.	Dangote Flour Mills Plc	Consumer Goods
9.	Flour Mills Nigeria Plc	Consumer Goods
10.	Union Dicon Salt Plc	Consumer Goods
11.	Vitafoam Nigeria Plc	Consumer Goods
12.	P.Z. Cussons Nigeria Plc	Consumer Goods
13.	Unilever Nigeria Plc	Consumer Goods
14.	Beta Glass Plc.	Industrial Goods
15.	Cap Plc	Industrial Goods
16.	Cutix Plc.	Industrial Goods
17.	Dangote Cement Plc	Industrial Goods
18.	Greif Nigeria Plc	Industrial Goods
19.	Lafarge Africa Plc	Industrial Goods
20.	Meyer Plc	Industrial Goods
21.	Premier Paints Plc	Industrial Goods

Source: Nigerian Exchange Group Website (2023)

The study relied on secondary data from annual financial reports and statements of the studied companies. Annual reports are useful in organisational behaviour and strategy studies because they provide comparable sets of data and represent an account of a firm's activities. Part X1, Chapter One of the Companies and Allied Matters Act (CAMA), requires companies to produce accounts that give a true and fair view of the state of affairs of the company.

Table 3 Variables Definition

Dependent variable		
DA	Discretionary Accruals: Measured using the Modified Jones Model	Arunet al. (2015);Dechowet al.1995
Independent variables		
FCEO	Female Chief Executive Officer: a dummy variable equal to 1; if the CEO is a female otherwise 0	Arunet al.(2015).
FNED	Female Non-Executive Directors: No. of Female Non-Executive Directors Total number of Directors on Board	Al-Shaer& Zaman (2016); Arunet al.(2015).
FED	Female Executive Directors No. of Female Executive Directors Total number of Directors on Board	Al-Shaer& Zaman (2016); Arun et al. (2015); Ong and Djajadikerta (2017)
Control variables		
Firm Size	Firm Size: measured as the natural logarithm of total assets for firm i in year t	Arunet al. (2015); Dang et al. (2021); Weiet al.(2017)
LEV	Financial Leverage: measured as total liabilities scaled by total assets	Arunet al. (2015); Dang et al. (2021); Weiet al.(2017)

Source: Author's Compilation from Reviewed Literature (2023)

This study adapted and modified the model of Udo, Oraka and Amahalu (2022) in determining the relationship between female boardroom participation on earnings management of listed manufacturing firms in Nigeria:

$$SOS = \beta_0 + \beta_1 FED + \beta_2 FMD + \mu$$

where:

SOS = Social Sustainability

FMD = Female Managing Director

The modified model used for the study is shown below as thus:

$$DA = \beta_0 + \beta_1 FCEOit + \beta_2 FNEDit + \beta_3 FEDit + \beta_4 FSZit + \beta_5 LEVit + \mu it$$

Where:

β_o = Constant term

$\beta_1 – \beta_5$ = Regression coefficient of the independent variable

µt = Error Term of firm í in period t

í = individual firms (1,2,3...21)

t = time periods (2012, 2013 ... 2021)

DAit = Discretionary Accruals of firm í in period t

FCEOit = Female Chief Executive Officer of firm í in period t

FNEDit = Female Non-Executive Director of firm í in period t

FEDit = Female Executive Director of firm í in period t

FSZit = Firm Size of firm í in period t

LEVit = Leverage of firm í in period t

This study made use of panel data from secondary sources through the sampled firms annual reports and accounts. Descriptive statistics were utilised to describe the mean, median, standard deviation, kurtosis, skewness, maximum and minimum values of the study variables via E-Views 10.0 statistical software. Inferential statistics of this study were carried out using:

i. Pearson Correlation Analysis: This is a good measure of relationship between two variables which tells us about the strength of relationship and also the direction of relationship.

ii. Panel least square (PLS) regression analysis: was used to predict the value of the dependent variable based on the value of the independent variables.

4. RESULT AND DISCUSSIONS

4.1 Data Analysis

4.1.1 Data Analysis

Table 4 Descriptive Statistics of Study Variables

	DA	FCEO	FNED	FED	FSZ	LEV
Mean	0.1560	0.1000	0.0680	0.1280	8.5260	1.2240
Median	0.1550	0.0000	0.0800	0.1150	8.3250	1.2700
Maximum	0.2900	1.0000	0.1800	0.2700	9.1800	1.8700
Minimum	0.0500	0.0000	0.0000	0.0000	7.5300	0.4900
Std. Dev.	0.0809	0.0062	0.0663	0.1106	0.5410	0.4260
Skewness	0.1903	2.6667	0.2996	0.0570	-0.2327	-0.2028
Kurtosis	1.7630	8.1111	1.8493	1.4540	2.1247	2.1707
Jarque-Bera	0.6979	22.7366	0.7013	1.0013	0.4094	0.3551
Probability	0.7054	0.0000	0.7042	0.6061	0.8149	0.8373
Sum	1.5600	1.0000	0.6800	1.2800	85.2600	12.2400
Sum Sq. Dev.	0.0588	0.9000	0.0396	0.1102	2.6344	1.6332
Observations	210	210	210	210	210	210

Source : E-Views 10.0 output, 2023

4.1.1.1 Interpretation

The descriptive statistics as illustrated in table 4 has a sample observation of 210 observations (21 firms x 10 years). Also, Table 4 shows that the level of involvement by the management of a company to influence the earnings reported in financial statements is averagely 15.60 percent, with a minimum of 5% involvement and maximum of 29%. Averagely, the presence of female CEO in the sample firms stood at 1%, a maximum percentage of 1%, a minimum of 0% at a standard deviation of 0.0062. On the average, the presence of female non-executive director is approximately 7%, with a maximum number of FNED at 18%, a minimum FNED presence at 0% with a standard deviation of 0.0663. The mean value for the FED on board is 12,80%, the maximum participation of female executive directors stood at 27% with a mimimum proportion of 0% and standard deviation of 0.1106. On the average, the mean of the sampled firms size is 8.5260 with a maximum firm size of 9.1800, a minimum firm size of 7.5300. Leverage has a mean value of 1.2240, a minimum degree of leverage at 0.4900 with a maximum degree of leverage at 1.2700.

Table 5 Pearson Correlation Analysis

	DA	FCEO	FNED	FED	FSZ	LEV
DA	1.0000					
FCEO	0.4606	1.0000				
FNED	-0.3395	0.0636	1.0000			
FED	-0.0263	-0.1524	0.8901	1.0000		
FSZ	0.3747	-0.6468	0.0682	0.1281	1.0000	
LEV	-0.3098	0.5328	-0.2908	-0.4541	-0.3002	1.0000

Source: E-Views 10.0 Output, 2023

The resultant output of the Pearson correlation indicate the existence of a positive relationship between FCEO (0.4606), FSZ (0.3747) and DA, but negatively associates with FNED (0.3395), FED (0.0263) and LEV (-0.3098).

4.2 Test of Hypotheses

Table 6 Panel Least Square Regression analysis testing the effect of female boardroom participation on earnings management

Dependent Variable: DA
Method: Panel Least Squares
Date: 01/10/23 Time: 15:20
Sample: 2012 2021
Periods included: 10
Cross-sections included: 21
Total panel (balanced) observations: 210

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.284031	0.064496	-4.403892	0.0000
FCEO	-0.040633	0.015222	-2.669347	0.0082
FNED	-2.208115	0.111187	-19.85941	0.0000
FED	-1.159706	0.069195	-16.76005	0.0000
FSZ	0.052948	0.007411	7.144426	0.0000
LEV	-0.011848	0.009183	-1.290166	0.1985

R-squared	0.733447	Mean dependent var	0.155689
Adjusted R-squared	0.726914	S.D. dependent var	0.077449
S.E. of regression	0.040473	Akaike info criterion	-3.548204
Sum squared resid	0.334166	Schwarz criterion	-3.452572
Log likelihood	378.5614	Hannan-Quinn criter.	-3.509544
F-statistic	112.2651	Durbin-Watson stat	1.963277
Prob(F-statistic)	0.000000		

Source: E-Views 10.0 Regression Output, 2023

4.2.1 Decision

Accept the null hypothesis if p-value is greater than 0.05 (p-value > 0.05), otherwise reject, and accept the alternate hypothesis.

4.2.2 Hypothesis One

H_o: Female chief executive officer has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

Table 6 indicates from the t-statistics of FCEO (-2.669347) that the presence of the Female chief executive officer in the Board of a company is negative yet strong, implying that despite the very few female presence as chief executive officer in the Board of the company, the impact of their contributions to the company is very strong.

Since p-value obtained is less than 0.05 (p-value 0.0082 < 0.05), the alternate hypothesis is accepted, and this implies that *female chief executive officer has strong significant but negative effect on discretionary accruals of listed manufacturing firms in Nigeria.*

4.2.3 Hypothesis Two

Ho: Female non-executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

Table 6 above shows that the t-statistics of FNED is -19.85941 implying that the presence of the Female non executive directors in the Board of a company is negative yet strong, implying that despite the few female presence (negative indicator as earlier observed) as non chief executive directors in the Board of the company, the impact of their contributions to the company is very strong.

Since p-value obtained is less than 0.05 (p-value 0.0000< 0.05), the alternate hypothesis is accepted, and this implies that *female non-executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.*

4.2.4 Hypothesis Three

H_o: Female executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.

Table 6 equally portrays that the t-statistics of FED is -16.76005 implying that the presence of the Female executive directors in the Board of a company is negative yet strong, implying that despite the few female presence (negative indicator as earlier observed) as non executive directors in the Board of the company, the impact of their contributions to the company is very strong.

Since p-value obtained is less than 0.05 (p-value 0.0000< 0.05), the alternate hypothesis is accepted, and this implies that *female executive director has no significant effect on discretionary accruals of listed manufacturing firms in Nigeria.*

Generally, Table 6 shows the regressed result of the effect of female boardroom participation indices on earnings management index:

DA = -0.284031 - 0.040633FCEO - 2.208115 FNED - 1.159706FED + 0.052948FSZ - 0.011848 LEV.

The drawn inference from the model is an indication that a unit increase in FCEO, FNED, FED and LEV will respectively exert 4.06%, 221%, 116% and 1.189% reduction on DA. On the other hand, an increase in FSZ will cause DA to increase by 5.29%. The adjusted R-squared of 0.726914 denotes that FCEO, FNED, FED, FSZ and LEV have 72.69% influence on DA, while the remaining 27.31% influence was caused by other factors outside the scope of the study. The Beta coefficient for β1 = -0.040633; β2 = -2.208115; β3 = -1.159706; β4 = 0.052948; β5 = -0.011848 delinetaes the existence of a relationship between FCEO, FNED, FED, LEV and DA, while the coefficient for β4 = 0.052948 shows a positive relationship between FSZ and DA. In a similar vein, the slope coefficient for the p-value: X1 = 0.0082 < 0.05; X2 = 0.0000 < 0.05; X3 = 0.0000 < 0.05; X4 = 0.0000 < 0.05; X5 = 0.1985 > 0.05 reveals a significant relationship between t FCEO, FNED, FED, FSZ and DA but a non-significant relationship LEV and DA. The resultant regression result infers that there is a significant and negative relationship between FCEO, FNED, FED FSZ and DA, while LEV has a positive relationship with DA.

4.2.5 Holistic Decision

Consequent upon the result of the F-statistic = 112.2651 and the assocoiated P-value = 0.000000, this study upholds that female boardroom participation has a significant but negative effect on earnings management of listed manufacturing firms in Nigeria at 5% level of significance. The results of this study is consistent with the works of Kontesa, Chai, Brahmana and Contesa (2020); Arioglu (2020); Harakeh, El-Gammal, & Matar (2019); Gull, Nekhili, Nagati, & Chtioui (2019). But negates the findings of Mnif & Cherif (2020), Anazonwu, Egbunike, & Gunardi (2018), Gordini & Rancati (2017), Wei, Ding, & Kong (2017).

CONCLUSION AND RECOMMENDATIONS

The thrust of this study is to ascertain the effect of female boardroom participation on earnings management of listed manufacturing firms in Nigeria. The study obtained data from annual reports and account and publications from the Nigerian Exchange (NGX) Group for the manufacturing firms that operated during 2012-2021 periods. In addition, the nexus between specific female boardroom participation measures such as female chief executive officer, female non-executive director, female executive director and discretionary accruals were assessed. To determine the relationship that exists amongst the variables effect thereof, Pearson correlation coefficient and Panel least square regression estimate were employed. This study revealed that female chief executive officer has a significant but negative effect on discretionary accruals ($\beta 1 = -0.040633$; p-value = 0.0082); female non-executive director has a significant but negative effect on discretionary accruals ($\beta 2 = -2.208115$; p-value = 0.0000); female executive director has a significant but negative effect on discretionary accruals ($\beta 3 = -1.159706$; p-value = 0.0000). In conclusion, female boardroom participation has a significant but negative effect on earnings management of listed manufacturing firms in Nigeria at 5% level of significance.

The following recommendations were made in line with the findings and conclusion of this study:

a. Considering the fact female chief executive officer has negative effect on earnings management, the presence of female chief executives in firms should be increased to ensure that the company's operations are working in accordance with its overarching strategy, with the end goal of maximising profits, increasing shareholder value, and improving market position, thus, discouraging earnings management notion.

b. Since the results showed that a proportion of female non-executive director affects earnings management, then gender diversity should be increased for an enhanced economic performance by contributing to the strategic plan of the company, monitor the performance of the company and offer constructive ideas and solutions, and act in the best interest of the shareholders thereby, dissuading the idea of earnings management.

c. Consequent upon the fact that female executive directors on board significantly reduce earnings management, this study thus recommends the recruitment of an ample number of females in the top-notch positions of the board to create a gender-diverse management team to reap the benefits of leadership styles of both genders.

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