Board Size, Board Composition and Voluntary Disclosure: Evidence from Listed Manufacturing Firms in Nigeria

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https://doi.org/10.33003/fujafr-2023.v1i2.36.102-112

Abstract
This study investigated the influence of board size and board composition on voluntary disclosure of quoted manufacturing firms in Nigeria from the period of 2015 to 2019. Thirty-three (33) were purposively selected for the purpose of this study. Information was produced from content analysis of yearly reports. Panel fixed effect model, correlation matrix and descriptive statistics were employed in the estimation. The estimation of the fixed effect model shows that size of the board and board composition have positive and significant connection on the level of voluntary disclosure evidenced by t-statistics = 10.524, p-value of 0.000 and 10.466, p-value is 0.000 respectively. However, the study concludes that board size and the composition of the board can affect the extent of voluntary disclosure positively. The study therefore recommends that the board should comprises of well experience, skilled, knowledgeable people who can govern the firm well. The firms should also guarantee that the number of experienced people in the board should be sufficient enough be able to provide the firm with more oversight.

Keywords: Board Composition, Board Size, Corporate Governance, Voluntary Disclosure.

1.0 Introduction
Corporate governance has assumed a significant role in fostering ethical conduct within businesses and establishing a just business environment in recent times. Embracing effective corporate governance practices allows a company to reduce information imbalances among its shareholders and other stakeholders by furnishing vital information (Agyeman, 2013). The focus on corporate voluntary disclosure and its determinants has engaged accounting researchers since the 1970s (Alqatameen et al., 2020). Transparency and disclosure are crucial facets of corporate governance (CG), gaining heightened importance in the era of globalization. Measures like board size, composition, and independence are examples of corporate governance mechanisms aimed at ensuring transparency and accountability within organizations. The effectiveness and quantity of directors within a company play a crucial role in its success, as emphasized by Yazan (2019) and Bruton et al. (2010), highlighting the significance of both board size and composition. Ho and Wong (2001) linked the late 1990s Asian economic crisis to insufficient investor confidence, weak corporate governance (CG), and transparency in many Asian markets and firms. Inadequate corporate governance practices, as outlined by Apostolos and
Konstantinos (2009), can worsen financial crises. Moreover, a multitude of global corporate scandals, involving well-known entities such as Enron, Worldcom, Pamalet, Cadbury, as well as Nigerian firms like Lever Brothers (now Unilever Plc) and Cadbury Nigeria PLC, have arisen due to insufficient corporate disclosures. These incidents have prompted global governments, policymakers, and regulatory bodies, including Nigeria, to implement measures aimed at restoring public confidence in CG financial reporting and the credibility of financial statements.

The Financial Reporting Council of Nigeria (FRCN) was tasked with harmonizing and structuring corporate governance standards across diverse sectors. According to Olatokunbo et al. (2020), managerial leadership and corporate governance have been implicated in numerous cases of poor performance, decline, and even the complete shutdown of various global companies. Information disclosure is pivotal in enhancing corporate governance by implementing codes of conduct, serving as the means through which external users access the firm's performance. Voluntary disclosure items are categorized into historical, current, and predictive, depending on the company's past, present, or future performance. Corporate voluntary disclosure, as defined by Shuaibu and Isah (2019), pertains to information shared at the corporation's discretion and is seen as a mechanism to minimize information asymmetry between the firm and external investors (Akhtaruddin & Haron, 2010). The extent of voluntary disclosure is influenced by societal attitudes, economic factors, and behavioral aspects such as corporate culture. According to Farrar and Hannigan (1998), disclosure is a fundamental principle followed by most contemporary systems. Strengthening a firm's voluntary disclosure can be instrumental in accessing limited resources. By providing more information, the firm can mitigate information imbalances between lenders and borrowers, fostering increased engagement from both parties and potentially leading to more efficient capital market operations and resource allocation.

Numerous research studies have been explored corporate governance mechanisms and voluntary disclosures in both advanced and developing nations. Some notable studies include those by Al-Janadi et al. (2016), Alqatameen et al. (2020), Apostolos et al. (2009), Chau and Gray (2010), Damagum and Chima (2013), Mohammed et al. (2014), Richard et al. (2022), and Saraswati et al. (2020). However, these empirical studies have produced conflicting results, particularly concerning the impact of corporate governance mechanisms, such as board size and composition, on voluntary disclosure levels. While some, like Al-Janadi et al. (2016) and Mandzilla and Zeghal (2016), found a significant link between independent non-executive directors and the extent of voluntary disclosure, others showed no substantial relationship between corporate governance and voluntary disclosure. This inconsistency highlights a research gap in understanding the connection between corporate governance mechanisms and voluntary disclosure.

The variations in data analysis, sample size, and research methodologies could contribute to these conflicting findings. To address this gap and produce a more reliable and accurate outcome, this study examined extensively the influence of board composition and board size on voluntary disclosures of Nigeria manufacturing companies considering a time-frame of 2015–2019 which holds distinctiveness as it predominantly encompasses the recent trends in this area of research and utilized a more advance data analysis method which are panel regression and Hausman estimation test.

The study utilized board size and composition as indicators of corporate governance mechanisms, while the dependent variable is voluntary disclosure. The practical implications of this research extend to manufacturing companies, non-financial businesses, government entities, financial analysts, and researchers. The aim of this study is to examine the effect of board size and board composition on voluntary disclosure of quoted Nigeria manufacturing firms.
2.0 Literature Review

The responsibility of managing the firm and safeguarding investors' interests lies with the board of directors. An effective board is typically comprised of both a chairman and non-chairman, and the optimal board size remains a subject of ongoing discussion (Ahmed, 2015). The size of the board can significantly impact its effectiveness in overseeing and controlling activities, reflecting its capacity to resist managerial authority. As per Ozkan (2011), larger boards may enhance supervision by leveraging increased experience and expertise. Conversely, Ibrahim and Ahmad (2017) propose that larger boards facilitate oversight through the delegation of responsibilities to more directors, while smaller boards are more efficient but vulnerable to external influence.

Keasey et al. (2005) highlight diverse interpretations of corporate governance, each necessitating distinct analytical approaches. Yasser et al. (2011) define corporate governance as a system governing the behavior of members within a company. Evaluating corporate governance often involves examining board composition, encompassing both executive and non-executive directors. Executive directors are part of management, while non-executive directors (NEDs) hold no other affiliations with the company (Richard et al., 2022). Board composition significantly influences the quality and quantity of voluntary reporting processes and aids in reducing agency costs (Suttipun, 2021). Contrary to this, Patelli and Principe (2007) challenge this notion, proposing that a high number of external directors may impede voluntary disclosure. The relationship between board composition and voluntary disclosure lacks consensus, with some studies like Abdelsalam and Street (2007) finding a positive correlation, while others like Cheng and Courtenay (2006) observe a negative one.

Corporate voluntary disclosure pertains to information released at the corporation's discretion (Shuaibu and Isah, 2019). As outlined by Appiah et al. (2016), disclosures fall into the categories of mandatory or voluntary. Research on voluntary disclosure investigates the extent and quality of information transparency within a company and its correlation with the effectiveness of corporate governance across different national economies (Nandi and Ghosh, 2012). In contrast, mandatory disclosure research concentrates on evaluating companies' adherence to financial reporting regulations and legal principles (Appiah et al., 2016). In today's context, the imperative for companies to engage in voluntary disclosure is escalating, given the inadequacy of mandatory disclosures in preventing corporate misconduct and market failures (Binh, 2012). Some of the researchers that have examined the effect of board composition and board size on voluntary disclosures are; Ahmed (2021); Al-Janadi et al. (2016); Alqatameen et al. (2020); Richard et al. (2022); and Saraswati et al. (2020). While some of these studies report a positive and significant influence, others find that board size and composition either have a negative effect or no significant impact on voluntary disclosures.

Board Composition, Board Size and Voluntary Disclosures (VD)

Chan et al. (2014) discovered that the quality of voluntary disclosure (VD) within an organization is associated with a higher proportion of non-executive directors (NEDs) on the company's board. This correlation was also affirmed by Wang and Hussainey (2013), who emphasized the significance of board composition (BC) in influencing firms' voluntary disclosure levels. The research proposed that the increased independence of NEDs contributes to enhancing the quality of voluntary disclosures. Suttipun (2021) similarly identified a positive and substantial correlation between board composition and voluntary disclosure. However, Michelon and Parbonetti (2012) contradicted this perspective, contending that a greater number of NEDs doesn't automatically guarantee effective voluntary disclosures by firms.
According to research by Agyei-Mensah et al. (2017) and Majumder et al. (2017), an increased board size (BS) is linked to positive effects on firms' voluntary disclosures. They argue that larger, more expert boards enhance the ability to assess and control managers, leading to greater transparency. Albitar et al. (2020) and Suttipun (2022) emphasize the crucial role of board size in enabling directors to monitor, evaluate, and control company leaders. In contrast, Richard et al. (2022) discovered that companies with larger boards tend to disclose more voluntarily compared to those with smaller boards. However, Cheng and Courtenay (2006) challenge this by suggesting that smaller boards are more effective in observing managers and ensuring high-quality voluntary disclosures. On the other hand, Ahmed (2021) contends that there is no significant impact between board size and voluntary disclosures.

**Theoretical Framework**

Scholars Stephen Ross and Barry Mitnick introduced the concept of agency theory in 1973 to address conflicts of interest between a company's principal and agents operating on its behalf (Jensen & Meckling 1976). According to this theory, a company is essentially a set of agreements between these two parties. The theory posits that agents possess more information than principals, creating a power imbalance that makes it challenging for principals to monitor agents' activities (Olagunju & Adenle, 2022). Agency theory suggests that companies facing high agency costs will employ control mechanisms, such as monitoring through corporate governance structures and voluntary disclosure, to mitigate these costs (Jensen and Meckling 1976).

Furthermore, Daily and Dalton (1994) propose that having independent directors not affiliated with the firm is essential to minimize agency costs and prevent adverse effects on a company's financial market performance. Johnson et al. (2005) argues that, from a control perspective, the CEO wields more power and influence than the chairman. Watson et al. (2002) acknowledge that companies can enhance the quality of their annual reports by voluntarily disclosing more information. Agency theory provides insight into why firm managers are incentivized to provide more information, and it highlights that agency costs tend to rise as the firm expands.

**Empirical Review**

Richard et al. (2022) studied the influence of CG on voluntary disclosures (VD) of 22 non-financial companies in Ghana covering 5 years’ period. The outcomes of the study discovered that the board size and board composition (BC) structure were important features that have significant impacts in determining the level of VD made by the firms.

Shuaibu and Isah (2021) examined the influence of board composition on the voluntary disclosure of listed Nigeria conglomerate, covering a period of 2006-2016. Multiple regression was used as the method of analysis. The findings from the data analysis revealed that board size, board composition, board independence and audit characteristics all have positive and significant relationship with voluntary disclosures of the selected conglomerate firms.

Saraswati, et al (2020) investigated the effect of CG mechanisms on voluntary disclosures of 27 quoted firms in Indonesian stock exchange covering 3 years’ period ranging from 2016-2018. The researchers utilized multiple regression analysis to examine the data, and the outcomes showed that both that the board independence and board size were positively related with voluntary disclosures.

In another study by Hassan (2015), the effect of CG mechanism on the voluntary disclosure of UAE 98 quoted companies in 2008 was examined. 29 voluntary disclosure items were utilized in the study, and the outcomes of multiple regression analysis indicated that CGM had a momentous and positive influence on the level of UAE-listed corporations’ disclosures.
Aljanadi, AbdulRahman, and Omar (2013) investigated how CGM are related to the voluntary disclosure practices of 87 quoted corporations in Saudi Arabia between 2006 and 2007. The researchers utilized 22 of the voluntary disclosure specifications and conducted multivariate analysis to examine the data collected in the study. The outcomes showed that the size of the firm, NEDs, and BS were positive and significant to the level of VD.

Chau and Gray (2010) conducted a study to explore the association between the level of VD and the rate of board independence and family ownership in 273 quoted firms in Hong Kong in 2002. The researchers used linear multiple OLS regression analysis to observe the connection between voluntary disclosures and BC and family ownership of a firm. The results indicated that having an independent chairman in the board has a positive impact on VD and reduces both family ownership levels NEDs.

3.0 Methodology
The study examined a five-year period from 2015 to 2019, and 33 firms quoted on the Nigeria Exchange Group (NGX) in the manufacturing sector were chosen using purposive sampling. The study population included all non-listed firms in Nigeria, from which 33 firms were purposively selected. 2015 was chosen as the base year due to the amendment of the Stock Exchange Commission's code of corporate governance practices in 2011, which took effect in 2014. Data for the study were sourced from the audited annual financial reports of the selected firms and are obtained from the NGX website. Descriptive statistics and a panel regression model were employed for data analysis in this investigation.

Measurement of Variables:
Independent variables
Kilie and Kuzey (2018) employed the number of directors on the firms' board as a metric to gauge board size, while board composition was assessed using the percentage of independent board members. The study incorporated Firm Size and Financial Leverage as control variables. Financial leverage was quantified as Total Debt divided by Total Equity, and Firm Size was represented by the natural logarithm of total assets.

Dependent Variable
A "Disclosure Checklists" was created from the annual reports through content analysis. A disclosure index was then established based on this checklist, which was used to check the annual reports of the companies chosen for the study against a self-constructed VD index (Chau & Gray, 2002; Ghazali & Weetman 2006). The study used an unweighted index approach, meaning that each item was given a score of either one (1) if it was unveiled in the annual reports, or zero (0) if it was not. The assumption behind this method was that all items were likewise important and no importance was given to different disclosures or their relative importance to different users.

Model Specification
VDI= f (BS, BC, FS, FA) ............................................................(i)
VDI\_it = β_0 + β_1 BS\_it + β_2 BC\_it +β_3 FS\_it + β_4 FA\_it + μ\_it.........................................................(ii)

4.0 Results and Discussion
Test of Hypothesis
Ho: There is no significant association between the board size, board composition and level of voluntary disclosure of quoted manufacturing firms in Nigeria.
Table 1: Hausman Effect Regression

<table>
<thead>
<tr>
<th>Summary</th>
<th>Chi-Sq. Statistics</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random BS</td>
<td>344.676</td>
<td>5</td>
<td>0.000</td>
</tr>
<tr>
<td>Cross-section random BC</td>
<td>520.886</td>
<td>1</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Author’s computation (2023)

Hausman test was utilized so as to test the random effect outcome against the fixed effect outcome whether the random effect is uncorrelated with the explanatory variables (Brooks, 2008). The Chi-square for BS is 344.67 while its p-value is 0.000 which is below 1%. More so, the chi-sq. statistic for BC is 520.886 while the p-value is 0.000 which is less than 1%. Since the p-values for BC and BS are less than 1% as stated by the decision rule, the fixed effect model is considered to be suitable for this study.

Table 2: Descriptive Statistics Result

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VDI</td>
<td>0.830</td>
<td>0.750</td>
<td>1.00</td>
<td>0.750</td>
<td>0.117</td>
<td>165</td>
</tr>
<tr>
<td>BS</td>
<td>9.892</td>
<td>10.000</td>
<td>18.000</td>
<td>4.000</td>
<td>3.356</td>
<td>165</td>
</tr>
<tr>
<td>BC</td>
<td>0.0886</td>
<td>0.000</td>
<td>0.5000</td>
<td>0.000</td>
<td>0.1358</td>
<td>165</td>
</tr>
<tr>
<td>FS</td>
<td>6.992</td>
<td>7.042</td>
<td>8.283</td>
<td>5.505</td>
<td>0.724</td>
<td>165</td>
</tr>
<tr>
<td>FL</td>
<td>0.491</td>
<td>0.140</td>
<td>5.375</td>
<td>0.0001</td>
<td>1.131</td>
<td>165</td>
</tr>
</tbody>
</table>

Source: Authors computation (2023)

The Table 2 shows that VDI is having a mean value of 0.830 with maximum value of 1.00 and 0.750. Whereas the board size (BS) and board composition (BC), firm size and financial leverage (FL) are having mean and median values of (9.892, 0.0886, 6.992, 0.491) and (10.0, 0.000, 7.042, 0.140) respectively. The standard deviation deviations for the variables VDI, BS, BC, FS and FL are (0.117, 3.356, 0.1358, 0.724, 1.131) respectively. The maximum values reveal that VDI having a maximum value of 100% tends to be highly dependent on BS and BC.

Correlation Analysis

Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>VDI</th>
<th>BS</th>
<th>BC</th>
<th>FS</th>
<th>FA</th>
</tr>
</thead>
<tbody>
<tr>
<td>VDI</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>0.329</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BC</td>
<td>0.173</td>
<td>0.0111</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td>-0.0345</td>
<td>0.0234</td>
<td>0.0225</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>FL</td>
<td>-0.1890</td>
<td>-0.1245</td>
<td>-0.0719</td>
<td>-0.0615</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Author’s computation (2023)

The correlation analysis tables show that BS has a positive but low relationship with VDI with correlation co-efficient of 0.329. Also, a very weak positive relationship exists between BC and VDI evidenced by correlation co-efficient of 0.173. A weak and negative relationship exist between firm size and VDI represented by correlation value of -0.0345 whereas financial leverage has a weak negative correlation value of -0.1890.
Table 4: Fixed Effect Regression

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.830</td>
<td>2.067</td>
<td>4.018</td>
<td>0.000</td>
</tr>
<tr>
<td>BS</td>
<td>2.182</td>
<td>2.034</td>
<td>10.524</td>
<td>0.000</td>
</tr>
<tr>
<td>BC</td>
<td>6.041</td>
<td>5.772</td>
<td>10.466</td>
<td>0.000</td>
</tr>
<tr>
<td>FS</td>
<td>0.003</td>
<td>0.008</td>
<td>0.3300</td>
<td>0.743</td>
</tr>
<tr>
<td>FA</td>
<td>-0.021</td>
<td>0.025</td>
<td>-0.676</td>
<td>0.547</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s computation (2023)

From Table 4, the outcome of the test of hypothesis revealed a positive and significant association between VD and BS, evidenced with t-statistics of 10.524 with p-value of 0.000. This signifies that there is a significant connection between BS and VD. The result of the study is in consonance with the outcomes of Agyei-Mensah et al. (2017); Albitar et al. (2020); Ghazali (2010); Majumder et al. (2017) and Richard et al. (2022) who also establish a positive connection between BS and VD. While in contrary, Cheng and Courtenay (2006) found a negative connection between BS and VD. Also, a significant and positive relationship exists between board composition and VD, evidenced by t-statistics of 10.466 with p-value of 0.000 which signifies that the null hypothesis should be rejected. This result agreed with the outcome of Chan et al. (2014) which stated that BC is positive and significant to VDI and in contrast, the study of Amran et al. (2014) and Hussainey (2013) revealed a negative significant relationship between BC and VDI. More so, firm size and financial leverage have no significant effect on voluntary disclosures evidenced with p-values of (0.743 and 0.547).

Discussion of Findings

The hypothesis results indicate a significant relationship between board size, board composition, and the level of voluntary disclosure (VD). This implies that as both board size and composition increase, there is a corresponding increase in the level of voluntary disclosure. The findings from the regression analysis align with previous research by Agyei-Mensah et al. (2017), Shuaibu and Isah (2021), Albitar et al. (2020), Akhtaruddin and Haron (2010), Chan et al. (2014), Ghazali (2010), Majumder et al. (2017), and Richard et al. (2022), all of whom observed a positive and significant correlation between board size (BS), board composition (BC), and voluntary disclosure (VD). A larger board size is associated with increased transparency through enhanced disclosure. Furthermore, a firm with a larger board size plays a pivotal role in overseeing and monitoring top management activities, potentially reducing the level of earnings manipulation.

However, these results differ from the findings of Cheng et al. (2006), who identified a significant and negative correlation between board size and voluntary disclosure (VDI). Conversely, this study contradicts the results of Amran et al. (2014), Damagum and Chima (2013), Michelon and Parbonetti (2012), Hussainey (2013), and Rouf (2011), all of whom found negative and significant associations between independent non-executive directors (NEDs) on the board and voluntary disclosure. Additionally, the results do not align with Mohamad and Sulong’s (2010) findings, which showed no significant correlation between board composition (BC) and voluntary disclosure (VDI). Furthermore,
the control variables, firm size, and financial leverage, demonstrated no significant effect on voluntary disclosures, as evidenced by p-values of 0.743 and 0.547, respectively.

5.0 Conclusion and Recommendations
The study focused on the influence of CG on the VD of Nigeria quoted manufacturing companies. It analyzed annual data from 2015 to 2019 for 33 manufacturing companies, including industrial and consumer goods companies. The findings revealed a positive and significant correlation between Board Size (BS) and the level of disclosure among manufacturing companies in Nigeria. Additionally, a positive and noteworthy relationship was identified between Board Composition (BC) and Voluntary Disclosure in listed Nigerian manufacturing firms. The study concluded that Corporate Governance plays a role in shaping the extent of disclosure and suggested that both Board Size and Composition can influence the voluntary information shared. To effectively govern a company, thus, the major recommendation of the paper is that; to effectively govern the firms, a larger BS with a balanced mix of proficiency, including business, commercial, and industry experience is required. More so, firms should make sure that the board has an adequate number of experienced members to provide better oversight.

References

https://doi.org/10.33003/fujafr-2023.v1i2.36.102-112


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*ISSN: 2992-4693 (Online); 2992-2704 (Print)*


