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Effect of Board Structure on Sustainability Disclosure in Anambra State Polytechnic Mgbakwu: Comparative Study of Tertiary Institution in Anambra State

Ezekwonna Chinedu. E[1], Modozie Emmanuel. C[2], Udeachu Peter. I[3]

[1]Head, Procurement Unit, [2]Internal Auditor, [3]Pay Officer,
[1,2,3]Anambra State Polytechnic, Mgbakwu, Awka, Nigeria

ABSTRACT

The study examined the effect of board structure on sustainability disclosure in Anambra state polytechnic. Board structure was proxy using board female representation and board meetings while the sustainability disclosure was measured using sustainability disclosure index. Ex post facto design was adopted and the data for the study was collected from the yearly reporting of the institution and also report on council sitting for the period of 2018-2022. OLS Regression Model was used in the data analysis and the results of the study indicates that board female representation and board meeting have positive and significant effect on sustainability disclosures in Anambra state polytechnic at 1-5% significant level. Hence, the study concludes that board structure ensures sustainability disclosure in Anambra State Polytechnic, Mgbakwu. In lieu of this, the study recommends among all that there is a need for consideration of female board representation when appointing the council members in the polytechnic. There should be policies that should require institutions to nominate women as council members. This is based on the fact that female board representation favours greater orientation towards stakeholders and social issues by influencing disclosures on sustainability activities. Also, government who appoints the council members should consider standardizing the number of meeting of the council as frequent meeting of the board (council) ensures sustainability in Anambra State Polytechnic.

***KEYWORDS**: Board Structure; Sustainability Disclosure; Board Female Representation; Board Meeting*

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1. INTRODUCTION

Companies now face mounting pressure to report on non-financial information that will enable investors assess the risks on all their operations (Emeka-Nwokeji & Agubata, 2019; Mahmood, Kouser, Ali, Ahmad & Salman, 2018). The pressure is not far from worldwide accounting scandal which put corporate governance issues in the front burner in public discourse (Srinivasan & Srinivasan, 2011 cited in Okaro, Ofoegbu & Okafor, 2018). Transparency and disclosure practices of companies are now major determinants for successful corporate governance. According to Kocmanová, Hřebíček and Dočekalová (2011), the practice of transparency and disclosure in companies highlight the importance of corporate governance in contributing to both corporate prosperity and responsibility. According to Leuz and Verrecchia (2000), the objective of corporate disclosure is to reduce information asymmetries between an organization and shareholders or potential buyers and sellers of the firm's shares. In an ever-changing and competitive business world, firms are faced with the need to be accountable not just for their financial performance but for other aspects of performance. In a bid for organizations to improve their competitive advantage and increase access to finance, they could strive to embark on distinguishing feats. These could include corporate disclosures on governance, environmental performance, community impacts, human rights, research and developments.

Thus changing in business environment and pressure from stakeholders led to increase in the number of firms providing disclosures above the statutory requirement in form of sustainability disclosure. More companies around the world are focusing and practicing sustainability today in line with global trending (Ganesan, Hwa, Jaaffar & Hashim, 2017). Yet it is evident that sustainability reporting and sustainability performance are still limited and largely fragmented with little improvement in sustainable performance (Huang & Watson, 2015; Jain & Jamali, 2016; KPMG, 2015; Rao & Tilt, 2016). Little wonder Moses, Che-Ahmad and Abdulmalik (2020) noted that firm's performance in terms of sustainability commitments reporting quality have incentivized stakeholders' agitation relating to the economic, environmental, and social impacts of companies' operations. The reason may not be far from the fact that some countries in the bid to improve transparency of their companies and improve investor's confidence have made sustainability reporting mandatory whereas it is still voluntary in some countries. Increase in number of firms providing information on sustainability issues has led to increase in number of empirical research on this important reporting model. There is significant number of researches on determinants of sustainability disclosures. Considerable literature also exists on the association between sustainability disclosures and firm performance. Also several studies has been done on the link between different aspect of corporate governance and sustainability disclosure.

This study relates to the last category of sustainability disclosure literature. Despite tremendous literature from developed countries and emerging countries on different corporate governance mechanisms and sustainability disclosure, knowledge regarding the link between corporate boards attributes and sustainability disclosure remains limited in Nigeria. Extant studies have not yet established a consistent understanding regarding the link between board structure and sustainability disclosures in the public sector organizations. This calls for further studies to validate the findings of existing literature.

Following the large number of corporate sustainability reports issued by firms around the world either as standalone report or as part of annual report, considerable research is conducted within the developed countries context and emerging economy on sustainability disclosures. There are significant number of research on determinants of sustainability disclosures (Omaliko & Okpala, 2022; Handoyo, 2020; Nguyen & Nguyen, 2020; Eneh & Amakor, 2019; Kühn, Stiglbauer & Fifka, 2018; Onyali, Okoye, & Okerekeoti, 2017; Nwobu, 2017; Cho, Okuboyejo & Dickson, 2017; Shamil, Shaikh, Ho & Krishnan, 2014). Considerable literature also exists on the association between sustainability disclosures and firm performance (Aifuwa, 2020; Emeka-Nwokeji & Osisioma, 2019; Al Dhaimesh, 2019; Asuquo, Dada & Onyeogaziri, 2018). Also several studies have been done on the link between different aspect of corporate govern/ance and sustainability disclosure (Moses et al. 2020; Saha & Kabra, 2020; Awodiran, 2019; King'ori, Naibei, Sang & Kipkosgei, 2019; Baba & Abdul-Manaf, 2017; Ganesan et al 2017; Mohammed, 2017; Shamil, et al 2014; Tamoi, Faizah, Mustaffa & Yussri, 2014; Michelon & Parbonetti, 2010).

These studies above generated mixed result on whether board structure has link with sustainability disclosure. While some studies found a positive association between board structure and sustainability disclosure others found a negative association between board structure and sustainability disclosure. Yet other studies found no link between board structure and sustainability disclosure and more importantly, none of these studies were limited to government sector. Hence, the present study seeks to examine the effect of board structure on sustainability disclosure in the public sector organizations using Anambra State Polytechnic as a reference point.

To achieve this purpose, the following hypotheses were formulated:

H_{01}: Board Female Representation has no significant effect on sustainability disclosures in Anambra State Polytechnic

H_{02}: Board meeting has no significant effect on sustainability disclosures in Anambra State Polytechnic

2. Review of Related Literature
2.1. Conceptual Review
2.1.1. Sustainability Disclosures
According to Soyka (2012), corporate sustainability is not just interest in the environment, corporate social responsibility or strategic philanthropy, but it is aware of the interests of stakeholders, which is ensuring economic viability, while maintaining a sustainable environment that is socially reasonable. Although there is no hard and fast rule stipulating how sustainability should be applied in business organizations, it is a principle that business organizations can apply to every aspect of their corporate life. However, sustainability issues can be incorporated into corporate practices such as operations, strategy and reporting.

Another perspective of sustainability is the notion of intergenerational equity, which is a core principle required for the sustainable development of any company. This study does not intend to measure corporate sustainability from an international and/or inter-generational perspective, rather it measures sustainability reporting by observing the economic, environmental, social and governance indicators in annual reports and stand-alone sustainability reports, social responsibility reports and citizenship reports of companies. Sustainability report is a report that contains financial performance information and non-financial information that includes social and environmental activities that enable companies to grow sustainably (Omaliko & Okpala, 2022).

2.1.2. Board Structure

In this modern age, businesses strive to satisfy their customers who are central to the organization and, nowadays, demand from organization quality products and services in a professional manner. Consequently, a proper governance mechanism has to be incorporated in order to ensure that the organization functions well with due consideration to the needs of its various stakeholders. According to Harford (2012), board structure ensures board's role in monitoring the organization's management. Board of directors plays a pivotal role in corporate governance and is appointed by the shareholders to govern the company. Therefore, board structure is viewed as a bestowed responsibility of board of directors in governing the organization and has corporate governance to ensure that those, who invest in the company, are able to obtain a return on their investments. In this respect, the board has the legal mandate to protect the right of investors as well as their shareholders.

The key functions of the board of directors includes among others, managing, strategy formulation and service (Zahra and Pearce, 1989). The attainment of these roles usually relies on the composition of the board (Pearce and Zahra, 1992). Thus, the perception that the firm's board size and composition, hence its board characteristics are major factors which influence the company's performance to a greater extent (Zahra and Pearce, 1989; Pettigrew, 1992; Dalton et al., 1998).

For the purpose of this study, attributes of the board structure was measured by; Board Female representation and Board Meetings.

2.1.2.1. Board Female Representation

Women representation in business management has been the focus of public debates from researchers, policy makers and investors in the recent decade. The 21st century workforce is typified by more women and employees with diverse ethnic backgrounds, alternative lifestyles, and intergenerational differences than in the past. According to Adams and Ferreira (2019), Female directors are said to possess higher levels of awareness and demonstrate this type of behavior more easily. The study notes that female directorship presence is an active participation of the female representative in the organizations board.

One benefit of having female directors on the board is a greater diversity of viewpoints, which is purported to improve the quality of board deliberations, especially when complex issues are involved, because different perspectives can increase the amount of information available," the authors explain. Given that gender diversity on boards is an issue rooted in the principle of equality of treatment, inequality in gender representation on boards can be combated through equality of opportunity reforms, equality of outcome reforms, or spread of information on gender bias. Governments and corporations have attempted to address the disproportionality of gender representation on corporate boards through both types of reform measures, including legislation mandating gender quotas (a reform based on the principle of equality of outcome) and comply or explain guidelines (a reform based on the principle of equality of opportunity).

2.1.2.2. Board Meetings

A board meeting is a formal periodic gathering of a Board of Directors. Most of the organizations, being public or private, profit or non-profit, are ultimately governed by a body commonly known as Board of Directors. The members of this body cyclically meet to discuss strategic matters. The Board of directors is the supreme authority in a company and they have the powers to take all major actions and decisions for the company. The board is also responsible for managing the affairs of the whole company. In the case of a Public Limited Company, the first board meeting has to be held within the first 30 days, since the incorporation date. Additionally, a minimum of 4 board meetings must be held in a span of one year. Also, there cannot be a gap of more than 120 days between two meetings. It is at such meeting that key issues including that of sustainability are being discussed and decision on disclosures reached.

2.2. Theoretical Framework

2.2.1. Stakeholders Theory

Stakeholder theory is also considered as an explainable theory for corporate environmental accounting (Deegan & Blomquist, 2006; Depoers, Jeanjean, & Jérôme, 2016; Liao et al., 2015). It involves the recognition and identification of the relationship existing between the company's behaviors and its impact on its stakeholders. Stakeholder theory is one of the major approaches to social, environmental, and sustainability management research, and scholars describe stakeholders as "those groups and individuals who can affect or be affected by the actions connected to value creation and trade", or as "the individuals and groups who depend on the firm to achieve their personal goals and on whom the firm depends for its existence".

Stakeholder theory contributes to understanding stakeholders' influences on organizations' actions and how organizations respond to these influences. Stakeholders often seek to influence their organization's philosophy and practice of sustainability reporting. Stakeholder engagement can be defined as a "trust-based collaboration between individuals and social institutions with different objectives that can only be achieved collaboratively". Sustainable development can only be advanced by trust-based collaborative effort from both organizations and their stakeholders. Organizations are moving toward stakeholder engagement mainly to increase trust, transparency, and accountability, and provide more effective communication regarding sustainability reporting. Corporate governance is conceptualized as the creation and implementation of processes seeking to optimize returns to shareholders while satisfying the legitimate demands of stakeholders. This study used the firm's characteristics, including corporate governance and business characteristics, to understand stakeholders' interests. Corporate governance characteristics of a firm can contribute to stakeholders' beliefs about whom and what really is important at that firm; business characteristics, including the financial and operational activities of a firm, can influence stakeholders' decisions

2.3. Empirical Review

2.3.1. Board Female Representation and Sustainability Disclosures

Hyun,Yang, Jung and Hong (2015) carried out a study on Women on Boards and Corporate Social Responsibility. Their study revealed that the number (or proportion) of women independent directors is positively associated with a firm's CSR ratings and that the strength of this relationship depends on the level of the firm's consumer market orientation.

Walid, Millicent and Philip (2017) in a study examined Board Gender Diversity and Corporate Response to Sustainability Initiatives: Evidence from the carbon Disclosure Project. Base on a sample of publicly listed Canadian firms over the period 2008-2014, we find that the likelihood of voluntary climate change disclosure increases with women percentage on boards. We also find evidence that supports critical mass theory with regard to board gender diversity. These findings reinforce initiatives being undertaken around the world to promote gender diversity in corporate governance while demonstrating board effectiveness in stakeholder management.

Anazonwu, Egbunike and Gunardi (2018), investigated the Corporate Board Diversity and Sustainability Reporting: A Study of Selected Listed Manufacturing Firms in Nigeria. The results showed no significant positive influence of board member nationality, while proportion of women directors, proportion of non-executive directors, and multiple directorships were significant. The study recommends among others, the adoption of NSE Sustainability Disclosure Guidelines for a unified integrated reporting framework for Nigerian firms, secondly, a heterogeneous board composition, which can leverage on the diverse set of skills of board members.

2.3.2. Board Meeting and Sustainability Disclosures

Naseem, Riaz, Rehman, Ikram and Malik (2017) investigated the impact of board characteristic on corporate social responsibility disclosure. Outcome of their study revealed that number of meetings is significant corporate governance characteristics to establish the link with corporate social responsibility disclosure.

Meibo and Lawrence (2018) also examined board governance and sustainability disclosure: a cross-sectional study of Sigapore-Listed Companies. Summary of their analysis showed that companies with larger board sizes and a higher number of board meetings are more likely to practice sustainability reporting, and their reporting quality are higher. Bell and Abdul-Manaf (2017) examined Board Governance Mechanisms and Sustainability Disclosure: A Moderating Role of Intellectual Capital. Summary of their study disclosed that board meeting was insignificantly related to sustainability disclosure.

3. Methodology

This study adopts *Ex-Post Facto Design.* Secondary data was used which already exists and cannot be manipulated or controlled. The population of the study is Anambra State Polytechnic Mgbakwu. The use of Anambra State Polytechnic Mgbakwu as a reference for the study was based on the fact that there is no known study on effect of board structure on sustainability disclosures in public sector organizations. Hence, the need for the present study. Data for study was obtained from the yearly reporting of the institution and also report on council sitting for the period of 2018-2022. OLS Model was employed to examine the effect of board structure (FDP & BM) on sustainability disclosure measured using Kinder Lydenberg Domini (KLD) social-environmental performance rating system.

3.1. Operationalization and Measurement of Variables

3.1.1. Dependent Variable

The dependent variable in this study is sustainability disclosure and was measured using Kinder Lydenberg Domini (KLD) social-environmental performance rating system and the content analysis method of data collection as used by Uwuigbe (2011), Omaliko and Okpala (2020), Omaliko, Nwadialor and Nweze (2020). For this purpose, a score of (1) was awarded if an item was reported; otherwise a score of (0) was awarded ***(See Appendix 1).*** Consequently, a firm could score a maximum of 20 points and a minimum of 0. The formula for calculating the reporting scores by using these 20 attributes ***(See Appendix 1)*** is expressed in a functional form below:

$$\mathbf{RS} = \sum_{i=1}^{20} d_i$$

Where:
RS = Reporting Score
di = 1 if the item is reported and 0 if the item is not reported
i = 1, 2, 3.... 20.

3.1.2. Independent Variable

The independent variable of board structure was proxy by board female representation (FBR) and board meeting (BM). The measurements were exposited on the table below as thus;

Table 1: Measurement for Dependent and Independent Variable

Variables	Measurement	A priori Expectations
Independent Variable		
Board Meeting	Number of board meetings	Johl, Kaur and Cooper (2013), Hambrick and Manson (2014)
Board Female Representation	Proportion of women in management to total number of board	Smith, Smith and Verner (2016), Adams and Ferreira (2019)

Source: Empirical Survey (2023)

3.2. Model Specification and Justification

The researcher designed a model in line with the previous studies to examine the effect of board structure on sustainability disclosure in Anambra State Polytechnic Mgbakwu. The functional model for the study is shown below as thus:

$$\mathbf{SEP = F(BFR, BM)}$$

The modified model for the study is shown as thus;

$$\mathbf{SEP = \beta_0 + \beta_1 BFR + \beta_2 BM + \varepsilon}$$

Where:
SEP = Social-Environmental Performance
BFR = Board Female Representation
BM = Board Meeting
ε = error term

4. Data Analysis and Results

Table 2: Descriptive Statistics

	SEP	BFR	BM
Mean	2.22	1.92	1.32
Std. Dev.	0.37	0.33	0.63
Maximum	4.6	3	5
Minimum	1.6	1	3
Observations	5	5	5

Source: Researcher's Computation (2023).

Table 2 shows that on the average, in a 5-year period (2018-2022), Anambra State Polytechnic, Mgbakwu was characterized by positive sustainability (SS) value of 2.22. This is an indication that Anambra State Polytechnic, Mgbakwu have positive sustainability value with a standard deviation value of 0.37.

The average board female representation (BFR) for Anambra State Polytechnic, Mgbakwu was 1.92 with a standard deviation value of 0.33. This means that institutions with values of 1.92 and above have board female representation in the council while institutions with the values below 1.92 are institutions without female directorship presence in the council. There is also a high variation in maximum and minimum values of BFR which stood at 3and 1 respectively. This wide variation in BFR values in Anambra State Polytechnic justifies the need for this study as we assume that institutions with higher BFR values are more sustainable than those institutions with low BFR values.

The average board meeting (BM) for Anambra State Polytechnic, Mgbakwu was 1.32 with a standard deviation value of 0.63. This means that institutions with values of 1.32 and above have council meeting frequently. There is also a high variation in maximum and minimum values of BM which stood at 5 and 3 respectively. This wide variation in BM values in Anambra State Polytechnic justifies the need for this study as we assume that institutions with higher BM values are more sustainable than those institutions with low BM values.

4.1. Test of Hypothesis

Table 3: Result on Effect of Board Structure on Sustainability Disclosure in Anambra State Polytechnic Mgbakwu.

Source	SS	df	MS		
				Number of obs	= 5
				F (2, 2)	= 2.72
Model	.400504575	2	.200252287	Prob > F	= 0.0269
Residual	.147495301	2	.073747650	R-squared	= 0.7308
				Adj R-squared	= 0.4617
Total	.547999876	4	.136999968	Root MSE	= 0.2716

SEP	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BFR	1.194805	.5458666	2.19	0.021	1.153869	3.543479
BM	.8319109	.2851907	2.92	0.007	.9951656	1.458987
_cons	.3801482	.0329415	11.54	0.000	6.100159	5.339862

Source: Result output from STATA 15.

4.2. Discussion of Findings

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

H_{01}: Board Female Representation has no significant effect on sustainability disclosures in Anambra State Polytechnic. This hypothesis was tested and the result of the OLS model as exposited on table 3 indicates that the relationship between board female representation (BFR) and sustainability disclosure is positive and significant with a P-value (significance) of 0.021 for the model which is less than the 5% level of significance adopted.

Likewise the result of positive coefficient of 1.19 is proving that, an increase in institution's number of female directors in the council while other remaining variables remain constant ensures sustainability in Anambra State Polytechnic by 1.19 %. Thus implies that institutions with high number of female directors in the council have higher performance. We consequently accepted the alternate hypothesis which contends that board female representation has significant effect on sustainability disclosure in Anambra State Polytechnic. The implication of this is that the number of female directors in the council of Anambra State Polytechnic should be increased as it ensures sustainability.

H_{02}: Board meeting has no significant effect on sustainability disclosure in Anambra State Polytechnic**.** This hypothesis was tested and the result of the OLS model as exposited on table 3 indicates that the relationship between board meeting (BM) and sustainability disclosure is positive and significant with a P-value (significance) of 0.007 which is less than the 1% level of significance adopted. Likewise the result of positive coefficient of 0.83 for the model is proving that the number of council sitting in the Polytechnic ensures Polytechnic's sustainability by 83%.

We therefore rejected the null hypothesis and the accepted alternate hypothesis which contends that board meeting has significant effect on sustainability disclosure in Anambra State Polytechnic. In other words, the frequency of council sitting in the polytechnic ensures social-environmental performance (sustainability) in the polytechnic.

5. Conclusion

The study having developed a model fit on board structure using (BFR & BM) captured that BFR and

BM have joint effect on sustainability disclosure in Anambra State Polytechnic, Mgbakwu. Based on this, the study concludes that board structure ensures sustainability disclosure in Anambra State Polytechnic, Mgbakwu

5.1. Recommendation

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

1. The study highlights the need to consider female board representation when appointing the council members. There should be policies that require institutions to nominate women as council members. This is based on the fact that female board representation favour greater orientation towards stakeholders and social issues by influencing disclosures on sustainability activities.
2. Considering also that frequent board (council) meeting has positive influence on sustainability disclosures; the study suggest that the government who appoints the council members should consider standardizing the number of meeting of the council as frequent meeting of the board ensures sustainability in Anambra State Polytechnic.

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