

# “Gender diversity and sustainability responsiveness: evidence from Nigerian fixed money deposit banks”

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# GENDER DIVERSITY AND SUSTAINABILITY RESPONSIVENESS: EVIDENCE FROM NIGERIAN FIXED MONEY DEPOSIT BANKS

## Abstract

This paper aims to explore the impact of gender diversity on firms' sustainability responsiveness in ensuring collective drive toward achieving sustainable development goals (agenda) for Nigeria. This study explored female engagement from three major platforms, namely women as directors, management team leaders, and female workforce. The data used to conduct this study were derived from the annual reports of the sampled banks spanning through the period of 2013–2016. However, while data for this study were analyzed using EViews statistical tool, the sustainability reporting data were ascertained using the content analysis method. The outcome of this study depicts that female directors, female workforce, and women in the management team all had an adverse and positive association with sustainability reporting. However, this association was all insignificant. This further buttresses that gender diversity was not the major driving force behind the sustainability reporting of the sampled banks in Nigeria. This is because the sector is highly regulated. Hence, the study recommends that notwithstanding the outcome, in attaining the sustainable development goals (SDGs), there is a need to have more female representation on the strategic position of authority.

## Keywords

gender diversity, firms' sustainability, female directors, female workforce, female management

## JEL Classification

M14, M41, M49

## INTRODUCTION

The presence of women on the board and on the highest level of management has recently been a key topic of discussion in contemporary research around the world. This is evident in economies where female participation share at the top level is at the lowest ebb. Going by contemporary history into recent times, women have been underrepresented in the circle of business globally. In the United States, it was observed in the twentieth century that only 3% of women represented were noticed or were seen to have held senior managerial or administrative positions in major corporations domiciled in the United States. Similarly, it was observed that only about 2% of women held top managerial positions in Europe. This trend was also consistent in so many countries where the percentage of female directors never surpassed 1%. This was evident in Italy where the top female directors never exceeded 0.1% (Fidasoski, Simeonovski, & Mateska, 2014; John, Makhija, & Ferris, 2014). In a similar trend, female representation on the Indian corporate board was observed to be below 7% (Arora & Kumar, 2016; India Bureau, 2016). However, in recent times, the proportion of female representation in the corporate organization has slowly but steadily increased as many countries are initiating gender

quotas to promote gender diversity (Kilic, 2015). Thus, over the years, gender diversity has massively gained attention in the corporate world (Tiwari & Dangwal, 2017; Agyapong & Appiah, 2015). More so, the need for good governance across the globe has consistently promoted gender diversity in the boardroom (D'Hoop-Azar, Martens, Papolis, & Sancho, 2017).

More so, the uniqueness, prowess, and soundness of women in all spheres of human activity have also significantly contributed to this upward trend. It is not an assumed fact or a hunch that in the educational system, we have a larger proportion of women who have excelled and exude competence in every area of life expectancies and hurdles, but in the workplace (workforce) where strategic decisions are made, their contributions are invincible as a result of low engagement and involvement of this human resource. A global footprint was half of the working-age women being employed in the labor market as compared to their male counterparts holding 70% participation (United Nations, 2015). In Nigeria, Anyanwu and Augustine (2013) averred that upon recruitment in ascertaining paid job, men explore about 69.2% chance of employment as compared to the female counterparts at 39.2%. However, this is an improvement from prior estimate where men dominate the workforce.

Consequently, recent research conducted by the McKinsey Global Institute (2015) suggests that the proportion of women in the labor market has equalled the proportion of the male counterparts globally, and that this trend could increase global productivity by 26% (Woolley, Chabris, Pentland, Hashmi, & Malone, 2010). More so, there is the possibility that increased gender diversity in thought could bring or lead to better firm performance (Ernst & Young, 2009). That is, the inclusion of more gender diversity amongst the board members in a firm may increase its chances of an efficient and highly effective organization capable of understanding their stakeholders' expectancies, hence, leading to better risk management and general business practice. However, the inclusion of women in strategic function would potentially provide better ideas and perspectives in the decision-making process on the board and executive management meetings.

Interestingly, the low representation of women at the top level of management across firms globally has stirred up the debates. The feminist conflict theorists think that scarce resources are wholly managed and controlled by the male counterparts and raise red flags on the marginalization of women despite their contribution to the family and the society at large (Skjelsbaek, 2010; Dahlerup, 2001). Thus, all efforts of the government to promote female involvement seem abortive because of the national cultural perception of the country. Nigeria being a patriarchal society, places men as the leaders of the society, making women have slim or no chance of heading top managerial roles/positions (Lincoln & Adedoyin, 2012; Sener & Karaye, 2014). Corporate governance codes had undergone various reforms in time past, and all these reforms place particular emphasis on diversity in boardrooms (Higgs Report, 2003; Davies Report, 2011; European Commission, 2014; Davies Report, 2015; Uwuigbe et al., 2018). As a result of this new code of corporate governance, many corporations are now issuing sustainability reports in order to fulfil the requirement of "comply or explain" (Al-Shaer & Zaman, 2016). For example, the Higgs Report (2003) and Davies Report (2011) noted that every company board should include a range of people with diverse backgrounds and perspectives. The European Commission Report (2014) opined that the worth of ethical comportment in every company is pretentious by the presence of female directors on the board.

The increase in gender diversity (workforce) has caught the attention of academic researchers and professionals in the past decade. However, the small representation of women in leadership positions/functions has led to a continuous argument on the role women play in the quest for a sustainable environment amidst corporations. However, despite a dearth in academic literature, few studies that have been carried out in this area of research on gender diversity and sustainability reporting observed mixed results (Bae & Skaggs, 2017; Sumedrea, 2016; Agyapong & Appiah, 2015; Ali, Metz, & Kulik, 2007). This lack of consensus in the existing literature created two different schools of thought. Some scholars think

that gender diversity has a positive influence on sustainability reporting (Nguyen, Locke, & Reddy, 2015; Terjesen, Couto, & Francisco, 2016; Ozordi, Uwuigbe, Obarakpo, Ikumapayi, & Gbenedio, 2018), while the other school of thought believes that whether there is a female on the workforce or not, quality of sustainability reporting is not affected (Wellalage & Locke, 2012; Chapple & Humphrey, 2013). This school of thought is in line with the social identity theory (SIT) and homosociality perspectives.

Despite the attention by scholars to the impact of gender diversity on firm performance, very limited studies have examined the impact of gender diversity on the extent of sustainability reporting or disclosure, especially in a developing country like Nigeria (Sikand, 2013; Al-Shaer & Zaman, 2016; Nadeem, Zaman, & Saleem, 2017). There is a dearth of literature in Nigeria. Thus, this study aims to fill the gap in the literature by examining the impact of gender diversity on sustainability reporting using the fixed deposit money banks in Nigeria as the sample for this study. The study further attempts to examine the relevance of women (directors, top-level management, and workforce) for improving the sustainability reporting in Nigeria banks. The study adopts the G4 sector-specific disclosures for financial services in measuring the sustainability responsiveness for Nigerian deposit money banks. More so, it aims to assess how the presence of female members on the board affects the sustainability reporting in a firm.

Thus, this paper has been structured to cover the review of relevant literature and hypotheses development, material methods, findings, and conclusion.

## 1. LITERATURE REVIEW

Currently, the role of gender diversity in the firm's financial performance has remained an unresolved issue. Similarly, it has received much empirical attention in the literature, with the avalanche of questions being asked as to whether gender diversity truly impacts on organizational performance. Response from the literature has received mixed or inconsistent results, while prior studies such as Agyapong and Appiah (2015), Sanan (2016), Low, Roberts, and Whiting (2015) confirm the benefits of gender-balanced board and affirm the fact that a positive association exists between gender diversity and firms' performance. Others such as Eulerich, Velte, and Uum (2014), Kilic (2015) found no relationship.

### 1.1. Female directorship and sustainability reporting

Female directorship is increasingly becoming important in today's board structure. Bennouri, Chtioui, Nagati, and Nekhili (2017) noted that the difference between female directors and their male counterparts is in terms of demographic characteristics, personality traits. These personality traits include their risk appetite, concerns for public interest, etc. Several studies suggest that the personal attributes of female directors

affect the strategic decisions of firms' performance. Furthermore, women are more likely to maintain their relationship and feel responsible for other needs and ensure that they act ethically and avoid any form of violations of organizational policy. In the same vein, women are more concerned with social and environmental risk than their male counterparts (Jaffee & Hyde, 2000; Smith & Roger, 2000). For example, Wellalage and Locke (2012) observed a negative relationship between female board membership and sustainability reporting. However, this assertion contradicts the findings of Ozordi, Uwuigbe, and Obarakpo (2018), Hyun, Yang, Jung, and Hong (2016) who averred that a positive association existed between female board membership and corporate social environmental disclosure. They noted that more women on board would lead to a better corporate social responsibility (CSR) performance. This resonates with the earliest findings of Fernandez-Feijoo, Romero, and Ruiz-Blanco (2014) who suggest that with at least three female directors on the board, a higher chance of better disclosure of sustainable matter within the organization is attainable. However, sustainability reporting becomes more ambiguous when board members age and experience are used as control variables. However, it is based on this notion in the literature that this study assumes that:

*H1: There is no association between female director and sustainability reporting in Nigerian fixed deposit money banks.*

## 1.2. Women in management team and sustainability reporting

In reviewing the association between women in management team and sustainability reporting, various arguments have been posed in the literature because some proponents such as Chapple and Humphrey (2013) express a positive opinion, they argue that the presence of women on the board brings a positive advantage to firms due to their cognitive style of leadership. This cognitive style includes good working conditions, conforming with organizational values, disseminating the information and resources, resolution of conflicts, and possessing a democratic leadership style. Furthermore, Betz, Connell, and Shepard (2013) averred that having women on top management level has a positive influence on the firm's ability to disclose sustainable matters. However, as opposed to the aforementioned view or perspective, the inclusion of women in management team could bring some perceived threats and costs to the organization. They may increase the chances of conflicts among intra-groups, which will lead to a slow decision-making system in the organization. Also, concerning the risk-taking appetite, women are considered risk-averse as compared to their male counterparts in financing decisions. This may result in poor resource allocation in the firm. For example, Nguyen, Locke, and Reddy (2015), Terjesen, Couto, and Francisco (2016) opined that women in management team could influence the sustainability reporting of firms. However, in an attempt to ascertain the nexus between women in the management team and the extent of sustainability reporting as discussed in the literature, this study postulates that:

*H2: There is no association between women in the management team and the extent of sustainability reporting in Nigerian fixed deposit money banks.*

## 1.3. Female workforce and sustainability reporting

Women representation on companies' boards has become an on-going debate in previous academ-

ic literature. This is evident in the feminist conflict theory. The feminist conflict theory argues that in every society, men have systematically oppressed women due to the control of limited natural and man-made resources (Agyapong & Appiah, 2015). However, as a result of some outstanding female performance on top-level management, the views of people are now changing over time. Despite all this, women are still not considered equal in the workforce structure. Several studies such as Hyun, Yang, Jung, and Hong (2016), Nadeem, Zaman, and Saleem (2017), Sikand (2013) on this subject matter (workforce diversity and sustainability responsiveness) reaffirm that gender diversity in the organization results in innovation, creativity, and quality decision-making process. However, despite these empirical findings, this study assumes that:

*H3: There is no association between the proportion of female workforce and sustainability reporting in Nigerian fixed deposit money banks.*

## 1.4. Theoretical framework

The study looked at two major theories. They include the stakeholder theory and social identity theory. The stakeholder theory represents sustainability reporting, while the social identity theory is based on gender diversity classification.

### 1.4.1. Stakeholder theory

This theory assumes that there are social benefits that may arise from assigning women to senior administrative or managerial positions (Cabrera-Fernandez, Martinez-Jimenez, & Hernandez-Ortiz, 2016; Ikumapayi et al., 2018). Similarly, Westphal and Milton (2000) averred that minority groups (women) tend to provide unique ideas that can support and leapfrog the organizations in making better managerial decisions. This theory is based on the premise that a firm response is not only to its shareholders but also all categories of stakeholders. This includes employees, government agencies, suppliers, environmental regulators (Nadeem et al., 2017). The board of directors should be held accountable and responsible for all categories of stakeholders when making strategic and corporate decisions for the firm. The

corporate sustainability concept is related to the linkage of external characteristics for the benefit of society at large (Ritter-Hayashi, Vermeulen, & Knoblen, 2016). The presence of women on board composition and workforce diversity will create an atmosphere of discipline and control within the firm due to their high level of scrutiny. This will allow the firm to comply with the requirement of sustainability disclosure in its annual report.

#### 1.4.2. *Social identity theory*

This is a social psychological theory that arises from structural symbolic interactionism and is based on the premise that society is a stable and structured social structure. The application of this theory reveals how gender is a “diffuse status characteristic (this means a characteristic that is not related to a specific skill). This is salient in person, role, and social/group identities (Carter, 2014). These identities show how an individual behaves when alone or in place of position or when attached to a group. A large proportion of female representation at board level tends to provide better monitoring since female director representation helps to improve managerial accountability. Women leaders tend to care not only about moral and social issues but also reputational concerns of the organization (Hyun et al., 2016). A company is seen as socially responsible based on their concerns for public interest through its sustainability reporting system.

## 2. METHODOLOGY

The study examines the impact of gender diversity on the quality of sustainability reporting of listed deposit banks in Nigeria. The concept of sustainability reporting is an ongoing global drive and firms need to subscribe to this responsiveness. However, since the bank industry is a well-regulated industry in Nigeria and has affected their annual reports, this study observed only the banking sector listed on the Nigerian stock exchange. Using convenience sampling technique, the study explored ten (10) registered banks out of fifteen (15) banks listed. The sample size was simply stirred up via the application of Krejcie and Morgan (1970), Uwalomwa, Olamide, and Francis (2015)

postulation that a 5% of a well-defined populace is capable of making inferences. To effectively drive home, the aforementioned objective, the yearly report of the sampled firms from 2013 to 2016 would be scrutinized to reveal any possible association between the dependent and explainable variables, respectively. Ten banks that disclosed sustainable information were selected for this study out of the total fifteen (15) banks in the country. This consists of about 70% of the entire populace, making it fit and reliable for generalizing. To perform the empirical analysis of this study, we presented the descriptive statistics result showing the measure of central tendency for all variables. Following this, the correlation statistics were used to show the absence of multicollinearity among variables. Multicollinearity exists when any variable is 80% correlated with another variable. Furthermore, the Hausman test was presented to determine whether the panel regression model fit the fixed or random effect. However, a fixed-effect model exists when the probability level of the Hausman test is less than 5% (statistically significant). If otherwise, a random-effect model exists. Finally, from the result of the Hausman test, we then presented the random panel regression result. We adopted the panel regression model in this study because the type of data gathered includes the properties of time series and cross-sectional data.

### 2.1. Development of sustainability reporting index

In developing the sustainability reporting index, the Global Reporting Initiative (GRI) was employed to account for the sampled firm's scores on actual items disclosure by them, respectively. The framework had three major pointers for evaluating the sustainable performance, namely economic, environmental, and social, which sums up to provide 79 items on the checklist. This framework suffers setbacks of not addressing specific industry needs. Hence, this study deliberately adopted the disclosures as entrenched in the G4 sector-specific disclosures for financial services (GRI, 2013).

An unweighted sustainability disclosure index was employed to account for the performance of the sampled firms. If sampled firms fully disclose environmental information, they get awarded 1 and 0 points for partial revealing, and non-revealing

respectively (Munshia & Duttab, 2016). However, the scores were accounted for by applying an arithmetical computation, where the sum of actual items revealed by each firm was charged against the maximum score possible (158).

$$\text{Therefore, } SDS = \frac{TD}{M},$$

where *SDS* – sustainability disclosure score, *TD* – total disclosure points for a firm, *M* – maximum points for a firm (158).

## 2.2. Independent variables (gender diversity)

Gender diversity is considered as the explainable variable in this study, which explores the various leadership and boardroom positions available in a company organization structure, which includes female directors (FDR) represented on the board, women represented in management team (WMT), the proportion of women on the workforce of the companies (WWF).

**Table 1.** Measurement of variables

Source: Authors' compilation (2019).

| Variables   | Item (proxies)                 | Measurement  |
|-------------|--------------------------------|--|
| Dependent   | Sustainability reporting index | G4 sector-specific disclosures for financial services (GRI, 2013)                                  |
| Independent | Female directorship (FDR)      | Actual number of female directors divided by total number of directors on the company board yearly |
|             | Women in management team (WMT) | Actual number of women in management team divided by total number of management team yearly        |
|             | Women on workforce (WWF)       | Proportion of women on the workforce divided by the total workforce yearly                         |

## 2.3. Model specification

The study has certain hypotheses stated above. Hence the model was adopted from the study of Akbas (2016) in order to ascertain the impact gender diversity has on the level of sustainability reporting in registered fixed deposit money banks in Nigeria.

The equation is computed implicitly as follows:

$$SDI_{it} = f(FDR_{it}, FRM_{it}, FWF_{it}, CONTROL_{it}). \quad (1)$$

After careful literature review, we added the following control variables to equation 1:

$$SDI_{it} = \alpha_{it} + \alpha_1 FDR_{it} + \alpha_2 FRM_{it} + \alpha_3 FWF_{it} + \alpha_4 ROA_{it} + \alpha_5 FSIZE_{it} + \alpha_6 MPS_{it} + \alpha_7 REV_{it} + \delta_{it}, \quad (2)$$

where *SDI<sub>it</sub>* represents sustainability disclosure index computed by GRI indicators of firm *i* at time *t*, *FDR<sub>it</sub>* shows the proportion of women on board for firm *i* at time *t*, *FRM<sub>it</sub>* denote the proportion of women in management team for firm *i* at *t*, *FWF<sub>it</sub>* shows the proportion of women on workforce structure for firm *i* at time *t*, *ROA<sub>it</sub>* represent the return on asset of firm *i* at time *t*, *FSIZE<sub>it</sub>* shows the natural log of firm total assets of *i* at time *t*, *MPS<sub>it</sub>* represent the market price of firm *i* at time *t*, *REV<sub>it</sub>* denote natural log of firm *i* revenue at time *t*. The error term is  $\delta$ , while the coefficient of determination is  $\alpha$ . The residual is shown as  $\delta_{it}$ .

## 2.4. Validity and reliability

The data required to address the aforementioned questions were derived from the sampled banks' annual reports and official websites. Consequently, to fully ascertain the degree of the sustainable bank responsiveness (disclosure), content analysis was employed in line with the unweighing scoring approach (Munshia & Duttab, 2016).

# 3. RESULTS

## 3.1. Descriptive statistics

The outcome from Table 2 shows the descriptive statistics, which depicts a mean of 0.3412 on the banks' sustainability disclosures across the sampled banks. This clearly show an average proportion of 34% of the banks under study, on the premises of the figure derived from the bank annual reports, a range from 0.196 to 0.62 disparity exists in the firms' sustainability responsiveness, which

**Table 2.** Descriptive statistics

Source: Authors' compilation (2019).

| Variables    | SDI    | FDR    | FRM  | FWF   | LOGREV | LOGFIZE | MPS      | ROA    |
|--------------|--------|--------|------|-------|--------|---------|----------|--------|
| Mean         | 0.3412 | 0.2376 | 0.27 | 0.41  | 5.23   | 3.282   | 8.709    | 0.0184 |
| Median       | 0.3035 | 0.26   | 0.27 | 0.43  | 5.22   | 3.3     | 5.52     | 0.0190 |
| Maximum      | 0.62   | 0.38   | 0.46 | 0.48  | 5.62   | 3.6     | 27       | 0.0420 |
| Minimum      | 1.196  | 0.08   | 0.13 | 0.17  | 4.89   | 2.9     | 0.81     | 0.001  |
| Std. dev.    | 0.1107 | 0.0812 | 0.08 | 0.08  | 0.23   | 0.2566  | 8.009    | 0.0116 |
| Skewness     | 0.8768 | -0.057 | 0.37 | -2.10 | 0.07   | -0.0121 | 1.0444   | 0.3110 |
| Kurtosis     | 2.8391 | 2.2017 | 3.10 | 6.40  | 1.61   | 1.5622  | 2.8551   | 2.4309 |
| Jarque-Bera  | 3.8763 | 2.4442 | 0.71 | 36.51 | 2.44   | 2.5846  | 5.4804   | 0.9030 |
| Probability  | 0.1439 | 0.2946 | 0.70 | -0.25 | 0.30   | 0.2746  | 0.0645   | 0.6366 |
| Sum          | 10.236 | 7.1297 | 8.19 | 12.17 | 156.92 | 98.46   | 261.27   | 0.554  |
| Sum sq. dev. | 0.3553 | 0.1912 | 0.17 | 0.19  | 1.56   | 1.0998  | 1860.399 | 0.0039 |

shows that the sector is fast responding to the holistic reporting involving the social, economic, and environmental concerns. Furthermore, the explained variables, which are FDR, FRM, FWF, and control variables (REV, LOGSIZE, MPS, ROA) show an average mean of 0.237, 0.27, 0.41, 5.23, 3.28, 8.71, and 0.018, respectively. The result clearly depicts that on average, in the sampled banks, about 41% of the women constitute the entire workforce, while about 27% of this population is in the management department, and 24% con-

stitute the proportion of women on the board of directors of these banks. Furthermore, the histogram normality chart clearly shows an adequate and normal representation of the data used for this study by 0.32 greater than 5% level of significance.

### 3.2. Correlation analysis

The summary of the correlation between the explained and explainable constructs is simultaneously captured in Table 3. It clearly reflects

**Table 3.** Correlation matrix

Source: Authors' compilation (2019).

| Probability | SDI       | FDR       | FRM      | FWF       | LOGREV   | LOGSIZE  | MPS      | ROA      |
|-------------|-----------|-----------|----------|-----------|----------|----------|----------|----------|
| SDI         | 1.000000  | -         | -        | -         | -        | -        | -        | -        |
| FDR         | -0.152336 | 1.000000  | -        | -         | -        | -        | -        | -        |
| FRM         | -0.815606 | -         | 1.000000 | -         | -        | -        | -        | -        |
| FWF         | 0.4216    | -         | -        | 1.000000  | -        | -        | -        | -        |
| LOGREV      | 0.267456  | -0.118897 | 0.149371 | -0.246296 | 1.000000 | -        | -        | -        |
| MPS         | 1.468751  | -0.633638 | -        | -         | -        | 1.000000 | -        | -        |
| ROA         | 0.1530    | 0.5315    | -        | -         | -        | -        | 1.000000 | -        |
| SDI         | -0.174785 | 0.300115  | 0.427680 | 1.000000  | -        | -        | -        | -        |
| FDR         | -0.939334 | 1.664799  | 2.503589 | -         | -        | -        | -        | -        |
| FRM         | 0.3556    | 0.1071    | 0.0184   | -         | -        | -        | -        | -        |
| FWF         | 0.416295  | -0.310937 | 0.149371 | -0.246296 | 1.000000 | -        | -        | -        |
| LOGREV      | 2.422736  | -1.731138 | 0.799363 | -1.344702 | -        | -        | -        | -        |
| MPS         | 0.0221    | 0.0944    | 0.4308   | 0.1895    | -        | -        | -        | -        |
| ROA         | 0.363359  | -0.416477 | 0.071800 | -0.178279 | 0.932372 | 1.000000 | -        | -        |
| SDI         | 2.063776  | -2.424022 | 0.380913 | -0.958721 | 13.64774 | -        | -        | -        |
| FDR         | 0.0484    | 0.0221    | 0.7061   | 0.3459    | 0.0000   | -        | -        | -        |
| FRM         | 0.018757  | 0.121918  | 0.611313 | 0.228194  | 0.276670 | 0.198641 | 1.000000 | -        |
| FWF         | 0.077269  | 0.649979  | 4.087455 | 1.240213  | 1.523467 | 1.072484 | -        | -        |
| LOGREV      | 0.7216    | 0.5210    | 0.0003   | 0.2252    | 0.1389   | 0.2927   | -        | -        |
| MPS         | 0.116975  | 0.249343  | 0.499973 | 0.381842  | 0.369607 | 0.347937 | 0.699722 | 1.000000 |
| ROA         | 0.623255  | 1.362433  | 3.054827 | 2.186170  | 2.104824 | 1.963812 | 5.182668 | -        |
| SDI         | 0.5382    | 0.1839    | 0.0049   | 0.0373    | 0.0444   | 0.0596   | 0.0000   | -        |

a linear relationship between the constructs. Multicollinearity could only be an issue if the pair-wise correlation coefficient among regressors is above 0.80. However, the explained constructs are free from any traits of multicollinearity. Furthermore, the explained variables, which are FDR, FRM, FWF, MPS and ROA, all depict a non-significant association, while LOGSIZE and REV are significantly with associated sustainability reporting.

### 3.3. Hausman test

**Table 4.** Hausman test

Source: Authors' compilation (2019).

| Correlated random effects – Hausman test |                   |              |             |
|--|-------------------|--------------|-------------|
| Test summary                             | Chi-sq. statistic | Chi-sq. d.f. | Probability |
| Cross-section random                     | 17.719679         | 7            | 0.0133      |

Hausman test was employed to ascertain the ideal model for the panel regression. However, the fixed-effect model treats both  $\alpha_i$  and  $\delta_i$  as regression parameters, whereas random-effects model treats them as components of the error term. Nevertheless, the rule states that [if the  $p$ -value is statistically significant, the alternative hypothesis is accepted (fixed-effect model), whereas, if the  $p$ -value is not statistically significant, the null hypothesis is accepted (random-effect model). From Table 4, the  $p$ -value (0.0133) < 5% level of significance, so

the null hypothesis is accepted, which advocates the fixed effect model to be used for the panel regression].

### 3.4. Fixed model panel regression analysis

The fixed-effect model was employed to best explain the association amidst the constructs. Consequently, the fixed-effect model clearly depicts that the explained constructs are harmoniously fit to explain about 79% of the bank's sustainability responsiveness (reporting), which infers that the explained constructs can only predict about 79% of the dependable construct event. However, the remaining proportion could be assigned to other variables not factored by this study. Subsequently, the Fisher ratio  $p$ -value of 0.019 is less than 0.05 level of significance (i.e.,  $0.019 < 0.05$ ); this clearly indicates the linear fitness of the explained and explainable constructs, and to explore the general association between the two constructs.

Table 5 depicts the fixed-effect model used to test if any association exists between the explained and explainable construct, respectively. The first hypothesis states that there is no association between female director and sustainability reporting. Findings from the table support the null hypothesis claim; however, it is statistically insignificant. This is proved in the  $t$ -statistic value of  $-0.15$ , and a  $p$ -value greater than 5% level of significance. The outcome suggests that female directors have an ad-

**Table 5.** Fixed effect panel regression

Source: Authors' compilation (2019).

| Variables                             | Coefficient | Std. error | t-statistic | Prob.  |
|---------------------------------------|-------------|------------|-------------|--------|
| FDR                                   | -0.071689   | 0.477860   | -0.150021   | 0.8831 |
| FRM                                   | 0.584572    | 0.535656   | 1.091319    | 0.2949 |
| FWF                                   | 0.221155    | 1.292048   | 0.171166    | 0.8667 |
| LOGREV                                | -0.113338   | 0.391811   | -0.289267   | 0.7769 |
| LOGSIZE                               | -0.110037   | 0.372375   | -0.295501   | 0.7723 |
| MPS                                   | 0.004977    | 0.006278   | 0.792761    | 0.4421 |
| ROA                                   | 2.168738    | 4.248131   | 0.510516    | 0.6182 |
| C                                     | 0.979485    | 1.694315   | 0.578101    | 0.5731 |
| Effects specification                 |             |            |             |        |
| Cross-section fixed (dummy variables) |             |            |             |        |
| R-squared                             |             |            | 0.798533    |        |
| Adjusted R-squared                    |             |            | 0.550573    |        |
| F-statistic                           |             |            | 3.220411    |        |
| Prob (F-statistic)                    |             |            | 0.019530    |        |
| Durbin-Watson stat                    |             |            | 2.347925    |        |

verse influence on sustainability responsiveness of the sampled banks by  $-0.07$ , but the degree can be ignored because it is not significant. It clearly explains that the presence of women on the board may not be the prime factor responsible for the rapid or staggering quality of bank sustainability reporting. This outcome is consistent with the works of Ferrier (2001), Wellalage and Locke (2012) who believe that a negative relationship exists between female director and sustainability reporting. In the same vein, Agyapong and Appiah (2015) averred that the percentage of women on board have no statistically significant relationship with firm financial performance in Ghanaian firms.

The second hypothesis states that there is no association between women in the management team and the extent of sustainability reporting. Findings from the table tend to conform to the null hypothesis. However, the association is positive but insignificant. This outcome is evident in the  $t$ -statistic value of  $1.091$ , and a  $p$ -value greater than 5% level of significance, which suggests that women in management team can influence the sustainability reporting of firms by  $0.584$ , but the weight of influence of this sampled firm is insignificant. This corroborates with the findings of Ferrier (2001), Nguyen et al. (2015), Terjesen et al. (2016) who believe that women in management team have an impact on the quality of sustainability reporting of a firm.

The third hypothesis states that there is no association between the proportion of female workforce

and sustainability reporting. Findings from the table imitate the null hypothesis. Consequently, the association is positive but insignificant. This is justified in the  $t$ -statistic value of  $0.171$ , and a  $p$ -value greater than 5% level of significance, which propose that the entire female workforce in the selected banks' structure would influence the sustainability responsiveness of these firms by  $0.22$ . However, the outcome is insignificant when tested. This resonates with the findings of Hyun, Yang, Jung, and Hong (2016), Nadeem et al. (2017).

The control construct's (LOGREV and LOGSIZE) show an adverse but insignificant effect on the sustainability responsiveness of the sampled banks. This is justified by the  $t$ -statistics value of  $-0.28$ ,  $-0.29$ , and a  $p$ -value greater than  $0.05$ , respectively. This suggests that the decision to imbibe a sustainable program (responsiveness) does not depend on the firm's turnover or the size and that sustainability disclosure is every business player card to staying in business for a long time, irrespective of the wealth power of the organization. Consequently, market per share and return on asset had a positive but insignificant influence on sustainability reporting of the sampled banks. This is proved by the  $t$ -statistic value of  $0.79$ ,  $0.51$ , and a  $p$ -value greater than  $0.05$ , respectively. This suggests that once a firm is operating on a financial feat (meeting key monetary targets), then it is possible to subscribe to the sustainable program to improve their public image. This resonated with the findings of Bae and Skaggs (2017).

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## CONCLUSION AND RECOMMENDATIONS

The paper explored deeply on female involvement in a company structure as a way of improving the quality of sustainable disclosure within banks, exploring women engagement across the various strategic positions. The study finds that gender diversity has a positive insignificant impact on the sustainability responsiveness of the sampled banks. The paper observed that a greater proportion of banks have subscribed to this reporting, but it is important for an absolute response from all the banks. In the same vein, a similar outcome was observed in the association between female director and sustainability reporting. Despite the insignificant association, the paper recommends that a more diverse board with female input across all level of administration would have a certain degree of influence on improving the quality and responsiveness of companies to sustainable programs. There is a dearth in literature as regards the subject matter within the context of Nigeria. However, the study goes further to enlighten the general public and policymakers on the relevance of women (directors, top-level management, and workforce) on improving sustainability reporting in Nigeria banks, as well as the added human resource required to help the country's quick attainment of its sustainable development goals or agen-

da. Based on the nature of the Nigerian financial sector, this research is bedevilled by some limitations. Firstly, the study only focused on the financial sector. Thus, the study did not look at other non-financial sectors of the economy. Secondly, the data used for this study were generated from listed sampled deposit money banks in Nigeria. Hence, the non-listed firms were not considered for this study. This will limit the generalization of the findings. However, future researchers can examine the relationship between gender diversity and sustainability reporting for listed companies in the non-financial sector.

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