

## Effect of Board Diversity on Financial Reporting Quality: Evidence from Firm's Listed in Nairobi Securities Exchange, Kenya

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### Abstract

Financial reporting is an important determinant of investment efficiency. The wave of recent scandals and loss of billions of shillings of investments in state corporations in Kenya as led to disclosure quality being questioned. The objectives of this study were to establish effect of board of director's age diversity and effect of board of director's gender diversity on financial reporting quality. The study was informed by The Upper Echelon theory. This study used longitudinal research design. The target population comprised 66 firms listed in NSE. Ultimately, 280 firm-year data of 40 firms listed in NSE between 2011 and 2017 were analyzed. The data collection instrument used in this study was data collection sheet. Panel data was analyzed using random effects model as the Hausman test found it consistent. The findings revealed that Age diversity ( $\beta_1=-1.88$ ,  $p=0.00$ ), Gender diversity ( $\beta_2=-1.56$ ,  $p=0.00$ ) had a negative and significant effect on financial reporting quality. Therefore, this study recommends that the Board of Directors of firms should be made up of both genders but not in equal proportion. Secondly, the ages of the board members should include both the young and the old and again not in equal proportion.

Key Words: Board Diversity, Age, gender, Financial Reporting Quality

### Introduction

Financial reporting is a primary determinant of efficiency in investment (Martínez, Garcia, and Cuadrado, (2015). Financial reporting's primary objective is to render high-quality financial reporting information on monetary issues, mainly of a financial nature, advantageous for the organizational decision-making process (IASB, 2018). It is therefore vital for an organization to provide information on quality financial reporting as it inspires capital suppliers and other stakeholders to make an investment, credit and comparable choices (Biddle and Hillary, 2012). Higher quality financial reporting increases the efficiency of investments, thus leading to transparency (Lambert, Leuz, & Verrecchia, 2017). In line with this argument, organizations with Financial Reporting of higher quality exhibits greater effectiveness of investment due to lower-investments cash flow sensitivity (Biddle & Hillary, 2012).

The change in economic and financial environs, scandals associated with accounting and fall of corporate giants for instance; Maxwell, WorldCom and Enron, which were seen as pacesetters for company results, has driven the need for understanding the concept of corporate governance in both advanced and nations that are still at developing stage (Bernile, Bhagwat & Yonker, 2016). This has also resulted in a global motion to adopt the dynamics of corporate governance to tackle opportunistic arrangements. This has undermined the financial information/data reliability of investors (Cao, Li & Zeng, 2016). A number of these corporate giants crashed owing to financial reporting mistakes such as fraudulent activities and weak management processes placed by the Board of Directors (Dionne, 2017). Studies have revealed that sound governance of the board not only decreases the negative implications of earnings management but also the probability of error-related financial fraud reporting.

Board diversity is a key to enhancing corporate governance practices in an organization (Wang, 2015), as diversity in the board room fosters better decision making and brings about innovation in an organization. Some of the features of a diversified board include gender, age, educational and functional background, industry experience or exposure and nationality (Wang, 2015). Srinidhi, Gul and Tsai (2011) opined that the best board is a mix of individuals with different skills, knowledge, information power and readily available to contribute his/her time professionally. It is noteworthy, that the cost of a diversified board is quite expensive as its high cost may impede on the organization's performance (Wang, 2015), and this could also affect its financial reporting quality.

As such, effect of Board diversity has attracted scholars across the globe. An investigation of the existing literature proves that most scholars have focused on the influence of board diversity on financial performance of firms rather than Financial Reporting Quality. For instance; Firoozi, Magnan and Fortin (2019) investigated the effect of diversity of board on the Quality of financial reporting among Canadian firms. Results of the study implicated that board diversity is a significant factor on desirable quality of financial reporting among firms. This study was carried out in Canada which presents totally different economic circumstances hence limiting the application of its findings for the study at hand. Aifua and Embele (2019) conducted a study on the influence of board characteristics on Financial Reporting Quality of manufacturing listed firms. Results of the study may fail to apply in the current study due to the fact that it was carried out in Nigeria. Mwangi (2018) conducted a study on the effect of audit committee characteristics on the Financial Reporting Quality of Non-Commercial state-owned corporations in Kenya which focused on State-owned corporations thus the current study seeks to fill the gap by focusing on firms listed in NSE.

However, from the reviewed studies, it is clearly evident that limited studies have evaluated the effects of all the identified aspects of diversity of board on Financial Reporting Quality among NSE listed firms in Kenya. This presents a gap in knowledge that this study intends to bridge on the effect of board diversity on firms listed in NSE. In this regard therefore, the study sought to answer the question; what is the effect of board diversity on financial reporting quality of firms listed in NSE?

### **Study Hypothesis**

The study tested the following hypothesis;

**H0<sub>1</sub>:** There is no significant effect of the board of directors' age diversity on financial reporting quality among firms listed in Nairobi securities exchange.

**H0<sub>2</sub>:** There is no significant effect of the board of directors' gender diversity on financial reporting quality among firms listed in Nairobi securities exchange.

### **Theoretical framework**

The study was anchored on Upper Echelon Theory (UET). Upper Echelon Theory was developed by Hambrick and Mason (1984) to explain how personality features of top managers influence organizational efficiency. The theory of the upper echelons suggests that the managerial background features partly predict organizational results, strategic decisions, and performance levels (Hambrick and Mason, 1984). This theory further asserts that Organizational results such as strategic decisions and levels of performance are a function of management features. It offers a structure under which executives examine how organizational results are influenced. Hambrick and Mason (1984) also suggest that the routes to organizational results represent the organization's values and cognitive bases of top executives. According to the behavioral theory of the firm (Cyert & March, 1963), top managers' experiences, backgrounds, and features shape their cognitive views and differences in strategic decision-making impacts. As executives start to experience information overload and

conflicting goals, they use their current cognitive systems to effectively organize information and simplify their decision-making processes, according to the upper echelons view (Shaw, 1990). The cognitive base of managers therefore affects the decision-making process by vision guiding, perception filtering and lastly information interpretation (Hambrick, 2007; Hambrick & Mason, 1984).

While the theory of information processing claims that, where complexity arises from the inclusion and coordination of distributed operations, a firm's ability to process data is likely to be a critical development approach (Egelhoff, 1991). The UET is primarily a theory of information processing, with managers acting based on the situations they face and also based on their filtered perception. Consequently, board characteristics connected with their ability to process information are anticipated to play a significant part in a company's strategic results (Dollinger, 1984). Therefore, if individual features have a bearing on organizational outcomes, it is realistic to think that there is an enhanced need to investigate the features of the boards on the execution of the policy and the effect on the quality of organizational performance and financial reporting.

### **Empirical Literature Review**

The empirical reviewed under this section included; age diversity and gender diversity and their implication on Financial Reporting Quality of firms as discussed by various scholars. Onatuyeh (2019) investigated how the quality of financial reporting among Malaysian listed firms was affected by diversity in terms of age of the board. The study adopted a longitudinal research design. The research entailed studying the population of interest over a period of 10 (ten) years (2008-2017). The study was an ex-post facto research since the researcher had no control over the variables regarding the ability to manipulate them. The population of the study comprised of all 823 listed firms as at 31st December, 2017. Judgmental sampling technique was then employed. From the sample frame, the researcher purposively selected 80 (eighty) non-banking corporations for the period. For data gathering, the study relied on content analysis in which the researcher reviewed financial statements of the selected firms between 2008 and 2017. Results of the study suggested that a positive relationship that was insignificant existed between age and financial reporting quality in Malaysian firms.

Oba (2014) conducted a study in Nigeria to examine the effect of board dynamics of 69 listed firms in the Nigerian Stock Market on the Financial Reporting Quality. The study employed Dechow and Dichevel model for estimation of accruals. Panel data was then obtained from the annual reports of the listed firms for a period of 4 years that is 2008-2012. The study variables under investigation included gender, age, board size and tenure of the board of directors. Data was then statistically analyzed by employing Statistical Package for Social Sciences (SPSS) thus the findings of the study revealed that age of the board members significantly had an effect on the Quality of financial reporting such that old board members were likely to have more experience than young ones thus older directors are likely to deliver higher quality of financial reporting.

Omor, Aduda and Okira (2015) performed a survey in Kenya to explore the effects in corporate corporations of demographic diversity in TMT (Total Management Team) and FRQ (Financial Reporting Quality). The study embraced both correlational research design and longitudinal research design. The target population consisted of all 55 state-owned corporate corporations included in the study, hence a census survey. A total of 30 corporate government companies with full information were chosen after the populations were filtered. This gave 248 individual TMTs and 241 annual financial statements firm year observations. The research used pooled information taken primarily from secondary sources. The data were extracted from the audited financial statements and management reports specifically the report of the chairman, the report of the managing director and the general reports of the auditor obtained from the individual state commercial corporations and the relevant parent ministries using the secondary data collection form for the period 2004 to 2013. The research used standard deviation,

variation coefficient, and blue index to assess the maximum variety and heterogeneity of specific demographic characteristics. Study findings indicated that excellent financial reporting is improving in commercial state companies by reducing diversity in era and functional background of TMTs. The research found that the government corporate companies have a negative connection between age diversity and FRQ.

Protasovs, (2015) examined the relationship between board diversity and financial performance using Ethnic, ages, education and gender diversity as diversity variables in Indonesia, Thailand, Malaysia & Singapore. 100 companies were examined within the South-East Asian region. Data for the quality of financial reporting for the five-year interval from 2009 to 2013 were used. The study employed use of census. For analysis, regression analysis, descriptive and inferential were employed. Findings of the study revealed that the older the board directors are, the better the FRQ since they are more exposed to traditional customs and culture of the company, hence more ethical. This was attributed to the fact that financial reporting quality is all about ethics of the accounting profession.

Wang and Kallunki (2015) conducted a study in Finland among listed firms to investigate the relationship between board diversity and Financial Reporting Quality with special emphasis on accounting conservatism. The study used the board gender diversity as an explanatory variable which is mainly presented as the percentage and number of female board directors in firms. The study population consisted of all the firms of 150 OMX Helsinki over the fiscal years 2009- 2014. Thus, the study applied a stratified sampling technique and the final sample consisted of 132 firms. Data was mainly collected using secondary method and was drawn from Datastream databases. The study used both descriptive and inferential statistics thus regression model was adopted and the Pearson correlation was also employed to test the correlation between the study variables. Findings of the empirical analysis revealed that there is no significant relationship between Board of member's gender diversity and the quality of financial reporting in terms of accounting conservatism.

Nyoka (2018) conducted a study in Kenya to investigate the effects of diversity of the board in manufacturing and allied firms listed in the NSE on earning management. The study adopted a descriptive research design and the study target population consisted of all the manufacturing firms in Kenya listed in NSE as at December 2017. For Data collection the study relied on Secondary methods and data was drawn from annual reports of the respective firms. The study relied on a 7-year period of data by looking at; proportion of male to female directors. STATA was employed for analysis of the data collected and multiple regression analysis and descriptive analysis was used. After running a number of tests such as multicollinearity, normality and unit root, findings of the study revealed that gender diversity of board members had a negative and statistically significant effect on earning management of the firms.

Mwangi, Oluoch, Muturi and Florence (2017) investigated the impact of the diversity of the audit committee on the quality of the state-owned financial reporting. The study used a descriptive research design and the sample size consisted of a total of 72 government companies. A census poll of all 72 state corporations was used by the research. To select the participants from the target population, the research used stratified purposive sampling. Primary and secondary data were used in the research. Primary data were acquired from the administration of the questionnaires and secondary data collected from the annual reports of the Kenya National Audit Office, Audited State Corporations Financial Statements and Finance Bills of the financial years concerned. The descriptive statistics used were frequency, mean and standard deviation, whereas the inferential statistics used were the evaluation of correlation and regression. To evaluate relationships between dependent and autonomous variables, regression analysis was used. The results from both correlation and regression analysis indicated that there was a statistically significant connection between audit committee diversity and the quality of financial reporting. Findings on gender diversity have also shown that a growing proportion of women in

commission have achieved greater quality financial reporting, so there is a favorable connection between gender diversity and the quality of financial reporting.

Pucheta-Martínez, Bel-Oms, and Olcina-Sempere (2018) conducted a study to examine the relationship between gender diversity of board members and financial reporting quality, CSR and firm performance. The study reviewed existing literature by employing secondary data looking at journals and books and theories related to gender diversity and quality of financial reporting. The study looked at the business case and female leadership style. Agency and stakeholder theory were used to link the variables. The study reviewed past literature on various factors such as CSR and performance of firms and FRQ for a period of 42 years specifically from 1975 to 2017, a wide overview of the primary outcomes of the association between women board managers and corporate choices is thus provided. Study findings indicated that both agency and stakeholder theories claim the significance of including female directors on boards to make economic and non-financial choices such as mitigating agency costs or improving engagement between companies and all stakeholders. The research noted that the establishment of compulsory gender quotas in companies may have an adverse or positive effect on their production, as there are some internal variables, such as financial crisis, corporate governance structure, financial scandals and state intervention, among others, that may alter the existence and influence of gender diversity in companies.

## Research Design and Methodology

This study employed longitudinal research design. The study' target population included 66 NSE listed companies for a ten-year period that is, between 2011-2017. Specifically, 280 firm-yearly data of 40 firms that were continuously listed in NSE between 2011 and 2017 formed the sample size. During the period, the security Exchange had a review of policies among many changes that included the implementation of new technology to enable the industry to function efficiently and effectively. The study employed secondary methods for data gathering in the study. Data collection sheet was employed for collection of data.

### Measurement of Variables

#### *Dependent Variable*

Financial Reporting quality was measured using Earning Value Relevance and reliability/faithful representation as discussed below;

#### 1. Earnings Value Relevance

According to Francis (2005), stock returns are considered to be an insightful indicator on the pay-off system of interest to capital suppliers, as well as an extremely summarizing accounting statistic of financial data. At the same time, it is understood that value-relevance collects data accuracy and increases revenue accuracy as a measure of free cash flow (Francis, 2005). This interpretation means that value relevance captures management choices that enable shareholders to monitor the operations of executives well. Following findings of Francis (2005), this research assessed the significance of income by adopting a regression model on influence of level of returns and change in earnings.

$$R_{it} = \beta_{0it} + \beta_1 EPS_{it} + \beta_2 \Delta EPS_{it} + \epsilon_{it} \dots \dots \dots 3.1$$

Where,

$R_{it}$  - Stock returns for firm i at year t;

$EPS_{it}$  - Earning per share for firm i at year t;

$\Delta EPS_{it}$  - change in earnings per share for firm i at year t.

$\epsilon_{it}$  - Error term

Following the above regression model, the absolute residuals in this research were applied as a firm year-specific proxy with earnings significance (Ghassen and Sellhorn, 2006; Gu, 2007; and Cascino *et al.*, 2010). According to Gu (2007), when absolute residual concentrations are high, they indicate decreased value levels; since residuals capture the proportion of stock yields not explained by accounting data.

## 2. Reliability/Faithfull representation

The study tested financial information reliability using a model developed by scholars Kim and Cross (2005). In particular, cash flows from operating activities and accruals are set at time  $t$  as the independent variables, while at  $t+1$  cash flow as the dependent variable. The model which comes up is as follows,

$$cfo_{it+1} = \beta_{0it} + \beta_1 cfo_{it} + \beta_2 Acc_{it} + \rho_{it+1} \dots \dots \dots 3.2$$

$cfo_{it+1}$  -Cash flows from operating activities in  $t + 1$  / Total assets at  $t$ .

$\beta_{0it}$  -constant of the equation

$cfo_{it}$  - Cash flows from operating activities in  $t$  / Total assets at  $t-1$ .

$Acc_{it}$  = DWC-DEP

DWC = Change in net accounts Receivables / total assets at  $t-1$ , plus change in inventories / total assets at  $t-1$ , plus change in other current assets / total assets at  $t-1$ , less change in accounts payable / total assets at  $t-1$ , minus change in taxes payable / total assets at  $t-1$ , minus change in other current liabilities / total assets at  $t-1$ , minus change in deferred taxes / total assets at  $t-1$ .

DEP = Depreciation / Total Assets at  $t-1$ ,

$\rho_{it+1}$  Is the error term

Reliability is described as the capacity of the two autonomous factors to explain working money flows in  $t+1$ . Since residuals in a regression model takes into account those factors not explained by the variables in the model, it shows then that the higher the value of residuals, the less reliable are the cash flows and thus lower FRQ.

## 3. Financial Reporting Quality Index

The study aggregated the two Financial Reporting Quality Metrics into a summary index to optimize the sample information content and tradeoff between the aforementioned measures and also that there is no generally agreed FRQ measurement technique. This was done by summing the residuals from the two regression models used to measure the FRQ, and then getting the mean. The integration of the two measurements into an index has the benefit of reducing the consequences of the measurement errors in the individual FRQ behavior. The aggregation procedure for corporate governance measures was justified by Dechow *et al.*, (2010).

### **Independent Variables**

**Age Diversity** Measured as a standard deviation of the age of all board members since the study was concerned with the spread of the age of directors rather than with the range between the youngest and the oldest director (Dagsson, 2011, McIntyre *et al.*, 2007).

**Gender diversity.** Gender Diversity was measured as the standard deviation of the proportion of women and men in board of directors (Erhardt *et al.*, 2003; Marinova *et al.*, 2010; Rose, 2007).

### Analytic Model and Model Specification

A panel data has been used to evaluate the hypotheses. The panel data was analyzed using the Fixed Effect Model (FEM) and the Random Effects Model (REM) whereby the Random effect model became consistent under the Hausmann test. The model testing direct effects of board diversity and financial reporting quality are as follows:

$$FRQ_{it} = \beta_{0it} + \beta_1 AD_{it} + \beta_2 GD_{it} + \rho_{it}$$

Where;

*FRQ* - is the measure of financial reporting quality.

$\beta_0$  is changes in FRQ that independent variables present in the model cannot explain. Noted that it is the constant in the equation.

*AD* Age diversity

*GD* Gender diversity

$\rho$  Is error term

*i* Firms

*t* Time

### Findings and Discussions

This section presents analysis of the findings of the study as set out in the research objectives and research methodology.

#### Descriptive Statistics

The financial reporting quality is of utmost importance to the economy as a whole. It is used as a measure by investors to know the best company to invest in. For instance, it can be used by the investors in the country to compare risks and returns of different companies. On the other hand, it can also be used to generate more income for government by attracting foreign investors. The study therefore deemed it important to establish the trends in financial reporting quality between 2011 and 2017. From the findings in Table 1, the financial reporting quality was highest in 2015 as shown by the mean of -0.41. The lowest reporting was exhibited in 2013 as shown by the mean of 0.41. However, there was no trend triggered by financial reporting quality over the years ( $F= 5.11, \rho=0.00$ ).

**Table 1: Financial Reporting Quality**

Year	N	Min	Max	Mean	p50	Mean	skewness	kurtosis
2011	40	-0.19	0.13	0.06	0.08	0.06	-3.08	12.58
2012	40	-8.40	0.18	-0.12	0.10	-0.12	-6.06	37.80
2013	40	0.06	1.45	0.41	0.27	0.41	1.27	3.82
2014	40	-1.42	0.78	0.08	0.09	0.08	-2.12	9.26
2015	40	-3.46	0.18	-0.41	0.09	-0.41	-1.91	5.49
2016	40	-1.21	0.15	-0.14	0.00	-0.14	-1.86	5.81
2017	40	-2.70	0.16	-0.13	0.10	-0.13	-3.59	18.30
Total	280	-8.40	1.45	-0.04	0.09	-0.04	-6.43	63.96

**ANOVA mean diff***F* 5.11*Prob > F* 0.00**Bartlett's test for equal variances:***chi2(6)* 287.74*rob>chi2* 0.00

Source: Research Data, (2020)

**Board Age Diversity**

Oba (2014) in his study found that age of the board members significantly had an effect on the Quality of financial reporting such that old board members were likely to have more experience than young ones thus older directors are likely to deliver a higher quality of financial reporting. As presented in Table 2 the study therefore deemed it important to establish the board age diversity of the targeted firms. The years of interest were between 2011 and 2017. Board age diversity was felt more in 2015 with a mean of 11.61 and the lowest in 2014. Nonetheless, there was no trend exhibited in the board age diversity over the years ( $F= 19.76, p=0.00$ ).

**Table 2: Board Age Diversity**

Year	N	Min	Max	Mean	p50	Sd	skewness	Kurtosis
2011	40	10.38	19.72	11.37	10.71	1.77	3.23	14.27
2012	40	9.35	11.65	9.76	9.72	0.42	2.97	12.91
2013	40	9.36	12.45	9.88	9.76	0.56	3.02	13.47
2014	40	9.30	11.04	9.67	9.66	0.31	2.37	11.32
2015	40	10.33	18.47	11.61	11.18	1.43	3.38	15.61
2016	40	9.55	11.77	10.54	10.53	0.52	0.39	3.20
2017	40	9.63	18.92	11.00	10.18	1.75	3.00	12.80
Total	280	9.30	19.72	10.55	10.18	1.35	3.51	20.27

**ANOVA diff***F* 19.76*Prob > F* 0.000**Bartlett's test for equal variances:***Chi2(6)* 208.51*Prob>Chi2* 0.00

Source: Research Data, (2020)

**Gender Diversity**

Board gender diversity is associated with better functioning of the board because of the diversity of skills, talents and experience brought about by board gender diversity. In fact, Mwangi, Oluoch, Muturi



and Florence (2017) argued that gender diversity has also shown that a growing proportion of women in commission have achieved greater quality financial reporting, so there is a favorable connection between gender diversity and the quality of financial reporting. Board gender diversity as indicated in Table 3 was more represented in 2014 with a mean of 3.70 with the lowest representation being seen in 2015 with a mean of 2.82. There was therefore no trend in board gender diversity over the years ( $F=30.02$ ,  $p=0.00$ ).

**Table 3: Gender Diversity**

Year	N	Min	Max	mean	p50	Sd	Skewness	Kurtosis
2011	40	2.12	3.72	3.50	3.55	0.27	-3.49	18.43
2012	40	1.41	3.50	3.17	3.15	0.37	-2.81	14.21
2013	40	1.41	3.66	3.34	3.48	0.41	-3.07	13.74
2014	40	3.46	6.36	3.70	3.60	0.45	5.28	31.54
2015	40	2.06	3.20	2.82	2.77	0.35	-0.36	1.95
2016	40	2.06	3.51	3.16	3.30	0.38	-1.71	4.65
2017	40	2.31	3.34	2.87	2.78	0.33	-0.07	1.55
Total	280	1.41	6.36	3.22	3.32	0.47	0.11	10.38

**ANOVA diff**

*F* 30.02

*Prob > F* .000

**Bartlett's test for equal variances:**

*Chi2(6)* 12.3782

*Prob>chi2* .054

**Source:** Research Data, (2020)

**Diagnostics Tests**

After testing normality using Jarque-Bera Test, the p-value is lower than the Chi (2) value then the null hypothesis cannot be rejected. It can therefore be concluded that the residuals are normally distributed. Multicollinearity test was used to check whether high correlation existed between one or more variables in the study with one or more of the other independent variables. The results of the VIF test ranged between 1.25 and 2.87. All the variables are less than 10. To conduct the heteroskedasticity test, this study uses Breusch-Pagan test for heteroskedasticity. The findings indicated that Chi2 (1) p value of 0.6662 was more than 0.05 revealing that null hypothesis was not rejected suggesting that assumption of constant variance was not violated. Autocorrelation was tested using Wooldridge test for autocorrelation where *p-values* was not significant means that there is no autocorrelation in the data. Unit root was tested using Fishers test where all p-values were significant meaning that there is no unit root in the data. This implies that the means and variances in the data do not depend on time, hence the application of OLS can produce meaningful results (Gujarati, 2012).

**Testing of Hypothesis**

Based on the Hausman test, the study hypotheses were tested using a random effect model as it proved consistent under the Hausman test. Consequently, the random effect results were used in the final analysis to overcome the deficiencies associated with the fixed effect results similar to Wachira (2017). As Kohler and Kreuter (2009) suggested, the random effect estimator handles better models that contain time-invariant variables that are usually omitted by the fixed-effects model. R-square of 0.54 reveal a quite strong strength of the relationship between the model and the variables, that approximately 54% of the variation in the output can be explained by the independent variables in the

model. And this relationship is statistically significant as the F value (Wald chi2 (6) = 285.64,  $p < 0.0$ ) of the model is significant at the 0.01 level. The results are as shown in Table 4 below.

**Hypothesis 1 ( $H_{01}$ )** stated that board of directors' age diversity had no significant effect on financial reporting quality among firms listed in Nairobi securities exchange. Findings showed that board age diversity had coefficients of estimate which was significant basing on  $\beta_1 = -1.88$  ( $p$ -value = 0.000 which is less than  $\alpha = 0.05$ ). The null hypothesis was thus rejected and it was concluded that board of directors' age diversity has a negative and significant effect on financial reporting quality. This was supported by Aifuwa and Embele (2019) as they found that BOD with higher level of education are likely to make informed decisions thus delivering higher quality of FRQ because of knowledge and expertise. Their study thus concluded that board characteristics partially affect financial reporting quality.

**Hypothesis 2 ( $H_{02}$ )** stated that board of directors' gender diversity has no significant effect on financial reporting quality among firms listed in Nairobi securities exchange. Findings showed that gender diversity had coefficients of estimate which was significant basing on  $\beta_2 = -1.56$  ( $p$ -value = 0.00) which is less than  $\alpha = 0.05$  hence it was concluded that gender diversity had a negative and significant effect on financial reporting quality. This was backed up by Pucheta-Martínez, Bel-Oms, and Olcina-Sempere (2018) who noted that the establishment of compulsory gender quotas in companies may have an adverse or positive effect on their production, as there are some internal variables, such as financial crisis, corporate governance structure, financial scandals, and state intervention, among others, that may alter the existence and influence of gender diversity in companies.

**Table 4: Fixed and Random Effect**

FRQ	Random Coef.	Z	Fixed Coef..	t
AD	(-1.88**	-9.95	(-1.72**	0.210582
GD	(-1.56**	-5.63	(-1.82**	0.320388
ROA	0.04	0.31	0.03	0.050868
FS	-0.016	-0.41	0.01	0.042049
_cons	4.20**	11.24	4.16**	0.388367
R-sq: within	0.5402		0.542	
Between	0.3984		0.3654	
Overall	0.5183		0.5145	
F(4,233)			68.93	
Prob > F			0	
Wald chi2(4)	299.99			
Prob > chi2	0			
<b>Hausman test</b>				
<i>b = consistent under Ho and Ha; obtained from xtreg</i>				
<i>B = inconsistent under Ha, efficient under Ho; obtained from xtreg</i>				
Test: Ho: difference in coefficients not systematic				
$chi2(4) = (b-B)'[(V_b-V_B)^{-1}](b-B)$				
Prob>chi2 = 0.0544				
<i>(V_b-V_B is not positive definite)</i>				

## Conclusion and Recommendations

The first objective of the study stated that board of directors' age diversity has a significant effect on the quality of financial reporting among listed companies in the Nairobi securities exchange. Findings indicated that board age diversity had estimates of specific coefficients based on  $\beta_1 = -1.88$  ( $p$ -value = 0.00 which is lower than  $p = 0.05$ ). Therefore, board age diversity has a negative significant effect on financial reporting quality.

The second objective held that gender diversity has a significant effect on the financial reporting quality of listed companies in the Nairobi securities exchange. Results showed that the gender diversity estimation coefficients were relevant based on  $\beta_2 = -1.56$  ( $p$ -value = 0.00) which is less than  $\alpha = 0.05$ , hence it is concluded that gender diversity has a negative and significant effect on financial reporting quality.

Based on the results from the study, it is recommended that the board should be made of board members of different ages but not in equal proportion. This is because age diversity negatively impacts financial reporting quality. There is evidence that the low diversity of gender in the board has a positive impact on financial reporting quality. Therefore, in order to increase financial reporting quality, it is important to include women and men in the board but not in an equal proportion. Similarly, this is because gender diversity affects financial reporting quality negatively.

This study recommends that another study be done to augment findings in this study; it therefore recommends a study be done on a greater number of firms rather than including only firms in the NSE for the sake of generalizing the results of the study. Moreover, including moderator factors can also be made in the research models of the new research by other scholars in future.

## References

- Aifuwa, H. O., & Embele, K. (2019). Board Characteristics and Financial Reporting. *Journal of Accounting and Financial Management*, 5(1), 30-44.
- Dagsson, S., & Larsson, E. (2011). How age diversity on the Board of Directors affects Firm Performance.
- Bernile, G., Bhagwat, V., & Yonker, S. (2016). Board diversity, firm risk, and corporate policies. *Journal of Financial Economics*, 127(3), 588-612.
- Cao, C., Li, X., & Zeng, C. (2016). Board diversity, inventor collaboration, and corporate innovation. *Inventor Collaboration, and Corporate Innovation (August 3, 2016)*.
- Cyert, R. M., & March, J. G. (1963). A behavioral theory of the firm. *Englewood Cliffs, NJ*, 2(4), 169-187.
- Dollinger, M. J. (1984). Environmental boundary spanning and information processing effects on organizational performance. *Academy of Management Journal*, 27(2), 351-368.
- Egelhoff, W. G. (1991). Information-processing theory and the multinational enterprise. *Journal of international business studies*, 22(3), 341-368.
- Firoozi, M., Magnan, M., & Fortin, S. (2019). Does proximity to corporate headquarters enhance directors' monitoring effectiveness? A look at financial reporting quality. *Corporate Governance: an international review*, 27(2), 98-119.

- Gull, A. A. (2018). *Gender-diverse boards and financial statements quality: the role of female directors' attributes*(Doctoral dissertation).
- Hambrick, D. C. (2007). Upper echelons theory: An update.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, 9(2), 193-206.
- Martínez-Ferrero, J., García-Sánchez, I. M., & Cuadrado-Ballesteros, B. (2015). Effect of financial reporting quality on sustainability information disclosure. *Corporate Social Responsibility and Environmental Management*, 22(1), 45-64.
- Mwangi, A. K. (2018). *Effect of Audit Committee Characteristics on Quality of Financial Reporting among Non-Commercial State Corporations in Kenya* (Doctoral dissertation, JKUAT).
- Mwangi, A. K., Oluoch, J. O., Muturi, W., & Florence, M. (2017). Effect of Audit Committee Diversity on Quality of Financial Reporting in Non-Commercial State Corporations in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 7(6), 288-302.
- Nyoka, O. (2018). Effect of Board Diversity on Earnings Management in Listed Manufacturing and Allied Companies in Kenya.
- Oba, V. C. (2014). Board Dynamics and Financial Reporting Quality in Nigeria. *Revista de Management Comparator International*, 15(2), 226-236.
- Omoro, N., Aduda, J., & Okiro, K. (2015). Demographic diversity in top management team and financial reporting quality in commercial state corporations in Kenya. *Donnish Journal of Accounting and Taxation*, 1(1), 1-16.
- Pucheta-Martínez, M. C., Bel-Oms, I., & Olcina-Sempere, G. (2018). The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure: A literature review. *Academia Revista Latinoamericana de Administración*, 31(1), 177-194.
- Rajula, V. A. (2016). Effects of board diversity on financial performance of commercial banks in Kenya. Unpublished MBA Project.
- Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review*, 15(2), 404-413.
- Wang, L., & Kallunki, J. P. (2015). Board gender diversity and accounting conservatism: Evidence from Finland (Doctoral dissertation, Master's Thesis, Department of Accounting, University of Oulu).