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ARTICLE

Effect of Board Characteristics on Financial Performance of Non-financial Firms Listed at the Nairobi Securities Exchange

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ABSTRACT

The incongruence between corporate governance and financial performance has resulted in the collapse, liquidation, and diminished profitability of several corporations in Kenya. Instructively, companies have been delisted from the Kenyan bourse as a result of irregularities and failures that curtail their profitability. Specifically, audits have pointed to failures in corporate governance, which highlight the lethargy of directors in addressing agency theory conflicts. In this regard, there is a need for evaluating the impact of board characteristics on corporations listed at the Nairobi Securities Exchange (NSE). Board characteristics such as size, independence, and diversity have a significant influence on a firm's strategic direction. Globally, numerous studies have investigated the relationship between corporate governance and financial performance. However, there is limited scholarly research to ascertain the role of individual board characteristics on listed firms' financial performance. Thus, this study's main objective was to determine the effect of board characteristics on the financial performance of non-financial firms listed at the NSE. A quantitative research was conducted using 26 randomly selected non-financial firms listed on the NSE. Using historical financial data from companies' financial statements, a correlational and regression analysis was conducted using Return on Equity (ROE) as the dependent variable. Notably, diagnostic tests such as the test for multicollinearity, autocorrelation, normality tests were conducted before the Pearson's correlation test. Importantly, the Panel Data Model was use to determine the goodness of fit, while the Panel Least Square model was used to select the appropriate model for regression analysis. The Fixed Effect Model was the most suitable model. As a result, the findings showed that board size and independence had statistically insignificant effects on the dependent variable, while board diversity (gender diversity) had a statistically significant influence on the financial performance of non-financial firms listed on the NSE. Moreover, firm size had a statistically insignificant effect as a moderating variable.

Keywords: Board Characteristics, Financial Performance, Corporate Governance

1 Introduction

Corporate boards are fundamental elements of organizational success because they define firms' strategic directions through the formulation feasible investment decisions, stipulation of regulations and policies, oversight, and contracting on behalf of stakeholders. Notably, boards of directors embrace the crucial role of oversight over managers and also provide expert advice and guidance to enable organizations to create and enhance value to shareholders (Cao, Yang & Liang, 2021). In this regard, boards have a significant influence on companies' performance. Accordingly, there is a need for understanding the role of board characteristics in organizations' financial performance. According to Arnaboldi, Casu, Kalotychou, and Sarkisyan (2018), board heterogeneity has a significant impact on companies' financial viability. Using a diversity index that includes age, size, composition, diversity, independence, and tenure, Arnaboldi et al. (2018) found that board characteristics determine a firm's performance variability, which indicates that the right match between board characteristics influences a company's profitability. In this regard, there is

empirical evidence that the relationship between corporate governance and financial performance is critical, particularly because of the role of corporate governance in dictating corporate management practices and regulatory frameworks (Hamid & Purbawangsa, 2022).

Evidently, board size, independence, and diversity are essential tools for enunciating a company's direction concerning values, strategic objectives, recruitment of chief executive officers (CEOs), and the delivery of shareholder value. Diversity highlights the variability of the directors' attributes concerning gender, age, education, and nationality. Crucially, gender diversity plays a significant role in determining a board's effectiveness. According to Chen, Chen, Kot, Zhu, and Wu (2021), female directors are conscientious, conservative, and cautious, which prevents firms from making non-viable financial decisions. Accordingly, gender diversity is a significant influence of firms' financial performance. Similarly, board size and independence have significant effects on the financial well being of organizations (Hamid & Purbawangsa, 2022). Board size highlights the number of directors on a board, while independence compares the number of independent and executive directors on a board. Accordingly, it is essential to investigate these characteristics and their influence on financial well-being.

Despite the significant impact of board characteristics on financial performance, firms continue to experience failures, especially due to conflicting interests between directors and shareholders. An exploration of the challenges that contribute to these failures indicates that incessant agency costs and problems contribute to poor financial performance in organizations. The agency theory reveals that the free-riding problem and coordination costs are the most prominent contributors of the challenges (Cao, Yang & Liang, 2021). The agency theory indicates that managers and employees may have self-interests, which may curtail the achievement of financial performance goals (Wanyama & Olweny, 2013). Accordingly, to avoid the agency problem, there is a need for strong boards with effective board characteristics to monitor the managers and employees. Notably, boards have significant influence on CEOs and managers. Accordingly, the superiority of the board may result in a negative or positive trajectory of financial performance. For instance, independent directors who are politically superior to CEOs or executive directors may play their oversight role effectively (Wang, Q., & Zhang, 2022). Accordingly, there a need for an optimal mix of board characteristics to prevent agency problems and enhance the financial performance of firms.

In Kenya, limitations in board characteristics have resulted in the collapse of listed firms. One of the most notable financial tragedies was the fall of Uchumi Supermarket, which was a retail giant in Kenya. Notably, court filings regarding Uchumi exposed the corporate governance gaps in a majority of publicly traded companies in Kenya. However, despite the Capital Market Authority's efforts in revolutionizing corporate governance practices, there are still cases of corporate failures as manifested by the failures of companies such as Kenya Airways, Prime Bank, Deacons EA, Mumias Sugar, Imperial bank, and National Bank of Kenya. As a result, the failures indicate that a majority of companies' board characteristics do not foster the delivery of shareholder value. Instead, some boards either fail in their oversight roles or play a direct role in the conflict of interest between shareholders and their agents (Connelly & Limpaphayom, 2004). Unfortunately, the failures of the boards result from ownership concentration, where a majority of firms are controlled by the higher ownership categories. As a result, block shareholders have greater incentives at low costs to control and monitor the management, which affects companies negatively (Amico, 2020). At the Nairobi Securities Exchange, a majority of firms are owned by block shareholders, who own more than 25% of their companies' equity (Mulinge, 2008). Consequently, higher ownership concentration undermines corporate governance, because of ineffective board characteristics such the lack of board independence and diversity, which affect financial performance negatively.

However, despite the apparent positive effects of board characteristics on the financial performance of companies, there is still a high degree of opacity concerning the effect of the characteristics on financial performance. For instance, the study by Orozco, Vargas, and Galindo-Dorado (2018) indicates that there is a positive relationship between board size and financial performance. However, Lipton and Lorsch (1992) and Topal and Dogan (2014) argue that the relationship between board size and financial

performance is negative. The same is the case for board diversity. Ombaba (2016) indicated that board diversity was instrumental in improving a company's ROA. However, Kilic (2015) opined that board diversity (particularly gender diversity) did not have any significant influence on financial performance. Accordingly, these, discrepancies in research findings curtail organization's ability to affect the relationships positively.

This study aims at exploring the effect of board characteristics on the financial performance of firms listed at the NSE. Specifically, the study determines the extent to which board size, independence, and diversity influence financial performance of non-financial firms at the Kenyan bourse. Instructively, there is a gap in literature concerning the effects of individual board characteristics on financial performance. Accordingly, this study will target use 26 randomly selected non-financial firms on the NSE using a quantitative research design that determine the correlation of the characteristics and financial performance to determine the nature of the relationship.

2 Literature Review

2.1 Conceptual Framework

The conceptual framework (Figure 1) highlighted the variables. Board size, independence, and diversity were the independent variables. Financial performance measured by ROE was the dependent variable while firm size, measure by the natural log of assets was the moderating variable.

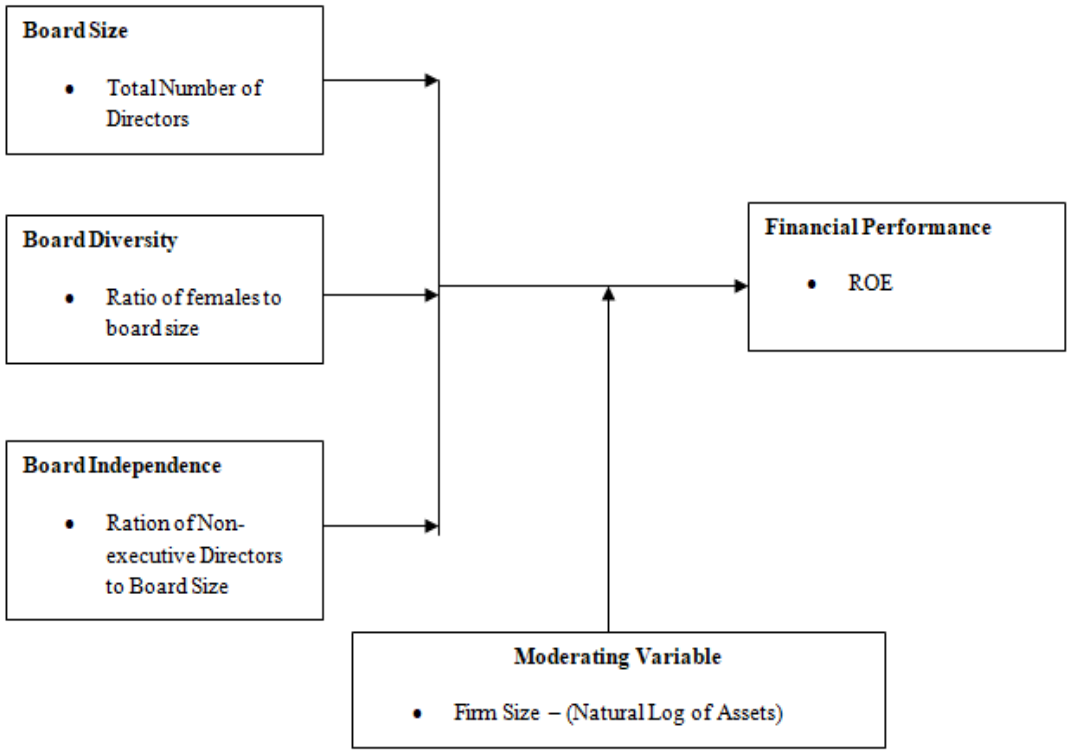

Figure 1: *Conceptual Framework Highlighting the relationship between the Dependent and Independent variables*

2.1.1 Definition of Variables

Board Size and Financial Performance

Board size is one of the notable factors in a firm's financial performance. It refers to the total number of directors on a board. The effect of the size of a board has had mixed arguments and findings among scholars. First, the Capital markets Authority advocates small board sizes to maintain the efficiency of decision-making and communication. Notably, the CMA notes that large boards are characteristic of

disagreements and delayed decisions. Similarly, Orozco, Vargas, and Galindo-Dorado (2018) postulated that larger boards are characterized by increased firm performance regarding the firms' reputations. However, other scholars posited that large board sizes had a negative effect on the financial performances of firms. In a study by Lipton and Lorsch (1992), large boards were ineffective because they fostered loafing and free-riding among the directors. Notably, in large boards, a majority of the directors do not participate during strategic decision-making processes. Vafeas (1999) indicate that firms with small boards constituting less than five members have a better understanding of a firm's earnings. As a result, such firms can be considered to have enhanced monitoring ability, which promotes optimal firm performance, and thus improved financial results. Topal and Dogan (2014) shared similar assertions in their study; they argued that there is a negative relationship between board size and a firm's financial performance. The negative relationship implies that an increase in the board size results in a decrease in the ROA.

However, other scholars contend that larger boards are suitable because they enhance the diversity of opinions, expertise, and thus profound decision-making. According to Andres and Vallelado (2008), firm owners should prefer large board sizes because they facilitate specialization, which influences effective monitoring and advising functions. According to the authors, directors are useful resources concerning expertise and knowledge. Accordingly, large boards would have significant resources that would promote viable decisions. Similarly, Goodstein, Gautum, and Boeker (1994) opine that large boards provide the necessary diversity that promotes the acquisition of the critical resources and reduction of market uncertainties. However, the studies that support large boards are limited and not supported by empirical evidence, which results in indeterminate conclusions regarding their effectiveness. Therefore, there is a need for understanding the actual relationship between board size and financial performance. Importantly, scholars should use the number of directors on the board as the main measure of board size.

Board Independence and Financial Performance

Board independence is the ability of the board to make their decisions without the interference from insiders in the organization. Like board size, there are contradictory research findings concerning the relationship between board independence and the financial performance of firms. Oludele, Magret, and Tobiah (2016) argue that there is a strong positive relationship between board independence and financial performance. In their study of Nigeria's listed manufacturing firms, Oludele et al. (2016) highlighted that increases in the independence of the board had a corresponding direct increase in the firms' financial performance. Essentially, Bosse and Phillips (2016) suggested that the independence of the board of directors was an added value to a firm because it increased the board's responsibility, provided judgment of self-governance, increased business network connections between the board and executive, and moderated the power of the CEO and chairman of the board.

To elaborate the concept of independence, a review of CMA's code of corporate practices in Kenya's listed firms is necessary. Section 2.1.3 of the 2015 Code of the practices of issuers of securities indicate that the most recommended board composition for optimal independence is one non-executive director for every two executive board members; non-executive directors should be one-third of the total number of directors (Capital Markets Authority, 2015). In this regard, boards that have higher numbers of outside directors have high degrees of independence. Accordingly, understanding the relationship between the dependent and predictor variables becomes essential. As highlighted by Oludele et al. (2016), increased board performance promotes effective monitoring, which results in improved decision-making processes. Similarly, although the study was conducted in Anglo-America, Zattoni et al. (2017) noted that there was a significant but weak positive relationship between board independence and financial performance. However, the weak relationship may be attributable to market factors. However, the study by Zattoni et al. (2017) revealed that markets had differing degrees of the outcomes of the relationship between board independence and financial performance. Conversely, other studies did not find any significant relationship between the two variables. In their study, Fuzia, Halima, and Julizaerma (2016) found mixed associations between different proportions of independent directors and financial performance. As a result, their study

did not yield any significant findings concerning the relationship. Similarly, in a study in the Indian context, Haldar et al. (2018) also indicated that board independence did not affect a firm's financial performance. Accordingly, there is a need for critical empirical studies to determine the exact nature of the relationships.

Board Diversity and Financial Performance

A study by Ombaba (2016) indicated that diversified boards performed better as measured by their companies' return on assets (ROA). Accordingly, there is a link between the diversity of board members and organizational financial performance. Corporate boards are products of director attributes, diverse perspectives, business experiences, and skill sets that are deemed suitable for the relevant organization. The main attributes of a board should incorporate management experience, accounting, industry knowledge, customer-care experience, disaster response, leadership, as well as strategic planning. In this regard, Cox (2016) opines that boards that evince enhanced diversity have significant positive implications for companies. The diversification of the management may result in adverse effects such as interpersonal conflicts and communication breakdowns. However, diversity enhances the breadth of perspectives when making crucial decisions, enhances innovation, promotes marketing in different consumer segments (Cox, 2016).

Similarly, Tarigan, Hervindra, and Hatane (2018) found a positive relationship between one element of board diversity and financial performance. In their study, the three authors reviewed the impact of gender, national, and educational diversity on the financial performance of firms listed in Indonesia. Accordingly, their study showed that that national diversity promoted increased financial outcomes while education and gender had the opposite effect. Regarding gender diversity, there is a contradiction between various scholars' findings. In their study, Earley and Mosakowski (2015) noted that women are considered to have cognitive styles that incline towards their feelings, which enhances their focus on harmony and the ability to facilitate dissemination of information. Similarly, Adusei, Akomea, and Poku (2017) argued that microfinance institutions with boards that have female directors report better financial results. However, the two authors also cautioned that boards that constitute 50% or more female directors had a negative effect on financial performance. However, other studies such as Kilic (2015) and Wang (2020) indicate the lack of a significant relationship between gender diversity and financial performance. According to Kilic (2015), there is a negative relationship between gender diversity and financial performance. In their study, the authors noted that the inclusion of women in boards is based on an ethical and economic perspective rather than financial performance. However, their general conclusion is that diversity in the composition of boards influences financial performance significantly. Wang (2020) also found that gender diversity did not have any positive impact on financial performance. Accordingly, there is a need for more elaborate studies concerning the effect of gender and financial performance to define the actual relationship.

Financial Performance

Financial performance is reflected in a company's ability to generate revenue to sustain its operations. Mirza and Javed (2013) opine that financial performance is crucial to investors, shareholders and the economy because it highlights the efficiency of the board and the firm's economic well-being. Similarly, Naz, Ijaz, and Naqvi (2016) also indicate that financial performance highlights a business entity's outcomes and results that reflect a firm's overall financial health over time. In this regard, it is one of the principle indicators of a firm's performance because of its direct contribution to the increment of shareholders' wealth. In this regard, it is important to measure the financial performance of listed companies to discern the effectiveness of their boards' characteristics. However, the most critical aspect of financial performance is its measurement. Due to the variances in every firm's operations, management styles, board, and objectives, companies have differing approaches to the measurement of financial performance.

Bayaraa (2017) indicated that there are numerous approaches to the measurement of financial performance including the calculation of ratios and the evaluation of explanatory variables. Specifically, Bayaraa (2017) categorized the financial measurement strategies into the measure of liquidity and

profitability using growth as an explanatory variable. Accordingly, ratios such as return on assets (ROA), return on sales (ROS), return on investment (ROI), and return on equity (ROE) are the most suitable measures of the financial performance of a firm. Naz, Ijaz, and Naqvi (2016) confirm Bayaraa's conclusions that one of the most effective techniques for measuring financial performance is the use of return on investment (ROI). ROI measures the amount produced on a company's wealth and is expressed as a percentage. Accordingly, it shows a firm's financial efficiency and performance (Naz, Ijaz, & Naqvi, 2016). However, Waddock and Graves (1997) argue for the use of return on equity (ROE) as a pertinent metric for quantifying financial performance. The authors indicate that analysts calculate the return on equity by dividing the net income by the total shareholders' equity. Accordingly, ROE is the most apposite measure of financial performance when assessing the effect of board characteristics on financial performance because of its influence on shareholders' value.

2.1.2 Moderating variables

Although board characteristics are the primary influencers of their relationship with financial performance, other factors such as firm size also affect the relationship. In this regard, it is important to operationalize these factors as the control variables during the study. Firm size plays a crucial in the degree of compliance to corporate practices. According to Madhani (2016), large firms manifest increased adherence to good corporate practices such as disclosures, which enhances their financial performance. On the contrary, small firms exhibit a laxity in embracing good corporate practices. However, Madhani notes that as the small firms grow, they improve their approaches to corporate governance, which has a positive correlation to financial performance. In a study by Maja and Josipa (2012), there was a significant weak, positive relationship between a firm's financial performance and its size as measured by calculating the natural log of assets. Using data from the Croatian Financial Agency, the researchers found that a company's size based on its total assets play a significant positive role on financial performance. Accordingly, an increase in firm size resulted in an increase financial performance.

3 Data and Method

This study adopted a quantitative approach, which embraced a correlational design. The researcher targeted 38 non-financial companies listed on the main investment segment of the Nairobi Securities Exchange. However, only 26 firms met the selection criteria. In this regard, the researcher gathered and analyzed the 26 company's historical, financial data for the years 2014 to 2019.

4 Results and Discussion

4.1 Summary of Descriptive Characteristics

This section presented the descriptive statistics of the study, which included values for mean, standard deviation, minimum, and maximum for the variables, as highlighted by findings on table 4.1 below.

Table 4.1: *Summary of Descriptive Statistics*

	LOG_BSIZE	LOG_BDIV	LOGBIND	FIRM_SIZE	LOG_ROE
Mean	0.909073	0.077162	-0.115555	22.83301	0.062798
Median	0.903090	0.079181	-0.102408	22.87500	0.045323
Maximum	1.204120	0.221936	-0.030118	26.72000	0.288920
Minimum	0.602060	0.000000	-0.301030	19.28000	-0.301030
Std. Dev.	0.126762	0.054389	0.067875	1.842177	0.068698
Skewness	-0.388646	0.356725	-0.886591	0.253411	0.262084
Kurtosis	3.151615	2.964606	3.102867	2.620485	2.504688
Observations	156	156	156	156	156

4.2 Preliminary Tests

4.2.1 Normality Test

The findings show that the skewness values of board size, diversity, independence, firm size, and ROE were -0.388646, 0.356725, -0.886591, 0.253411, and 0.262084 respectively (Table 4.2). Moreover, the kurtosis values for board size, diversity, independence, firm size, and ROE were 3.151615, 2.964606, 3.102867, 2.620485, and 2.504688 respectively. Accordingly, the skewness values for each variable were within the acceptable ranges, close to 0 (zero), while the less of kurtosis are within the range of 0 and 3. The values for board size and independence are 3.152 an 3.103, which are also close to 3. Accordingly, the data is normally distributed. Table 4.2 presents the results of the normality test.

Table 4.2: *Normality Test*

	LOG_BSIZE	LOG_BDIV	LOGBIND	FIRM_SIZE	LOG_ROE
Skewness	-0.388646	0.356725	-0.886591	0.253411	0.262084
Kurtosis	3.151615	2.964606	3.102867	2.620485	2.504688
Observations	156	156	156	156	156

4.2.2 Multicollinearity Test

The results of the test as displayed in Table 4.3 showed that there was no multicollinearity between the predictor variables. Specifically, the statistics revealed that the tolerance values for the three independent variables were 0.647, 0.943, 0.756, and 0.682 (Table 4.3). These values were greater than 0.2. Similarly, the variance inflation factor values were 1.546, 1.061, 1.323, and 1.466, which were less than 10.

Table 4.3: *Multicollinearity Test*

Coefficients							
	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1 (Constant)	-1.248	.482		-2.588	.011		
BSIZE	.030	.019	.152	1.598	.112	.647	1.546
BDIV	-.494	.244	-.160	-2.028	.044	.943	1.061
BIND	-.119	.296	-.035	-.401	.689	.756	1.323
Firm Size	.056	.024	.214	2.311	.022	.682	1.466

4.2.3 Autocorrelation Test

The results of the test as displayed on Table 4.4 show that the Durbin Watson test statistic for this study's data was 2.1311, which was close to 2, and within the set limit of 1.99 and 2.099. Therefore, there was no autocorrelation in the dataset used for this study.

Table 4.4: *Autocorrelation Test*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.247581	0.482072	-2.587956	0.0106
BSIZE	0.030498	0.019080	1.598385	0.1120
BDIV	-0.494363	0.243724	-2.028372	0.0443
BIND	-0.118765	0.296407	-0.400682	0.6892

FIRM_SIZE	0.055602	0.024062	2.310798	0.0222

R-squared	0.114793	Mean dependent var	0.088176
Adjusted R-squared	0.091344	S.D. dependent var	0.478193
S.E. of regression	0.455830	Akaike info criterion	1.298132
Sum squared resid	31.37491	Schwarz criterion	1.395884
Log likelihood	-96.25431	Hannan-Quinn criter.	1.337835
F-statistic	4.895388	Durbin-Watson stat	2.131066
Prob(F-statistic)	0.000971		

4.3 Correlation Analysis

The results of the correlation analysis showed that there was a weak positive relationship between board size and the financial performance (ROE) of non-financial firms listed on the NSE (r= 0.132, p=0.050). Similarly, there was a weak positive relationship between board independence and return on equity as shown by coefficients: r=0.141, p=0.039 (Table 4.5). However, there was strong weak positive correlation between board diversity and return on equity. Specifically, the Pearson correlation coefficient(r) was 0.229 and the p-value was 0.002. Moreover, there was weak positive correlation between the ROE and firm size, (r=0.086, p=0.142). Accordingly, there was significant, weak positive correlation between board size, diversity, independence, firm size and returns on equity. Table 4.5 below presents the results of the correlation analysis.

Table 4.5: *Correlation Analysis*

Correlations

		Log ROE	Log Bsize	Log BDIV	LogBIND	Firm Size
Log ROE	Pearson Correlation	1	.132	.229**	.141*	.086
	Sig. (1-tailed)		.050	.002	.039	.142
	N	156	156	156	156	156
Log Bsize	Pearson Correlation	.132	1	.191**	.463**	.579**
	Sig. (1-tailed)	.050		.009	<.001	<.001
	N	156	156	156	156	156
Log BDIV	Pearson Correlation	.229**	.191**	1	.281**	.028
	Sig. (1-tailed)	.002	.009		<.001	.362
	N	156	156	156	156	156
LogBIND	Pearson Correlation	.141*	.463**	.281**	1	.327**
	Sig. (1-tailed)	.039	<.001	<.001		<.001
	N	156	156	156	156	156
Firm Size	Pearson Correlation	.086	.579**	.028	.327**	1
	Sig. (1-tailed)	.142	<.001	.362	<.001	
	N	156	156	156	156	156

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

4.4 Regression Analysis and Hypothesis Testing

4.4.1 Regression Results

The researcher ran a multiple regression analysis to determine the statistical significance of the relationship between the independent variable, moderating variable and the dependent variable using the Eviews software.

Table 4.6: *Results of the Regression Analysis*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.006377	0.077330	-0.082471	0.9344
LOG_BSIZE	0.026708	0.056419	0.473395	0.6366
LOG_BDIV	0.258215	0.104748	2.465105	0.0148
LOGBIND	0.049579	0.092758	0.534497	0.5938
FIRM_SIZE	0.001345	0.003642	0.369171	0.7125
R-squared	0.063267	Mean dependent var		0.062798
Adjusted R-squared	0.038453	S.D. dependent var		0.068698
S.E. of regression	0.067365	Akaike info criterion		-2.525868
Sum squared resid	0.685236	Schwarz criterion		-2.428116
Log likelihood	202.0177	Hannan-Quinn criter.		-2.486165
F-statistic	2.549627	Durbin-Watson stat		2.131066
Prob(F-statistic)	0.041560			

Table 4.6 shows that there is a statistically significant relationship between ROE and board diversity, as highlighted by a p-value of 0.0148. The p-value of 0.0148 is less than 0.05, which reveals a statistically significant relationship between the financial performance and board diversity. However, the relationship between ROE and board size, independence, and firm size is statistically insignificant. The relationship between board size and ROE is reflected by a p-value of 0.6366, which is greater than 0.05, hence the statistically insignificant association. Similarly, board independence also has a statistically insignificant relationship with ROE, as shown by a p-value of 0.5938, which is greater than 0.05. Firm size was also statistically insignificant as shown by the p-value of 0.7125. Accordingly, this model shows that there is at least one regressor variable with a statistically significant correlation with ROE, which makes it a good fit for explaining the relation between the independent variables and the dependent variable.
The regression equation was:

$Y= \alpha+ \beta1X1+\beta2X2+\beta3X3+\varepsilon$ …….…… (ii)

The equation may be estimated as:

ROE = -0.006377+0.02671BSIZE+0.25822BDIV+0.049579BIND+0.001345FSize ….. (iii)

4.5 Discussion of Findings

The results of regression analysis as highlighted on table 4.6 showed that board size and independence were statistically insignificant in explaining changes in ROE. Board size had a p-value of 0.6366. Board independence had 0.5938. However, board diversity had a statistically significant relationship to the financial performance of the selected non-financial firms listed at the NSE. With a p-value of 0.0148,

the variable was statistically significant because it was less than the significant level of 0.05. Nevertheless, firm size had a p-value of 0.7125, which showed that the moderating effect of firm size on the association between the predictor and dependent variables was statistically insignificant. Accordingly, the relationship between board size and independence and ROE was statistically insignificant while board diversity was statistically significant.

The study's results contradicted findings by Topal and Dogan (2014) in a study that targeted a sample of 136 firms. In their investigation, Topal and Dogan (2014) noted that there was a significant positive relationship between board size and a firm's Return on Assets (ROA). Notably, although the correlation analysis noted weak positive correlations, the correlations were statistically insignificant; as a result, board size did not have an effect on financial performance. Accordingly, it is evident that board size did not have a significant influence on the financial performance of non-financial firms listed at the NSE.

Similarly, the study also disputed the findings that board independence had a significant positive effect on financial performance. The study by Oludele, Magret, and Tobiah (2016) found a strong positive relationship between board independence and financial performance. Notably, their findings were statistically significant, which was contrary to this study, whose weak positive correlation was statistically insignificant. However, the studies by Fuzia, Halima, and Julizaerma (2016) and Haldar et al. (2018) reinforced this study's findings. The two studies found no statistically significant relationship between board independence and the financial performance of firms, which supported this study's results. Additionally, the findings also disputed the results of the study by Maja and Josipa (2012), which showed that firm size had a statistically significant effect on the relationship between the dependent and predictor variables.

Importantly, these results are in line with the results of the correlation analysis, which showed that board diversity had a correlation coefficient of 0.229 and a p-value of 0.002, which showed that board diversity had a weak positive effect on the financial performance of non-financial firms listed in the NSE. The results of the study reinforce the findings of Ombaba (2016), who argued that was a significant positive relationship between gender diversity and financial performance. Specifically, Ombaba's study found that gender diversity had a correlation coefficient of 3.012 and a p-value that was less than 0.05, which showed a weak positive relation between gender diversity and the dependent variable. Moreover, the findings of this study are in line with the results of a research by Adusei, Akomea, and Poku (2017), which showed that microfinance institutions that had a higher number of women on their boards reported better financial results. Accordingly, women play a crucial role in enabling firms to achieve their financial goals. However, this study contradicted the findings of Kilic (2015) and Wang (2020) who opined that gender diversity did not have any positive correlation to financial performance of firms.

5 Conclusions

Board characteristics have a significant impact on the financial performance of firms and there is adequate evidence to support the impacts. Listed, non-financial firms in Kenya comply with policy directives by the Capital Markets Authority to constitute boards that meet the criteria for size, independence, and diversity. Accordingly, the optimality of board characteristics enhanced firms' financial performance. Tests for correlation between board size, independence, and diversity indicate significant weak to strong positive correlation between the three variables and return on equity. However, regression analysis showed that there was no statistically significant relationship between board size, independence and return on equity. Moreover, the regression analysis showed that there was a statistically significant relationship between board diversity and return on equity. Crucially, gender diversity was the main measure of board diversity. Accordingly, these findings showed that gender diversity was a crucial element of corporate governance. Instructively, Kenyan firms should strive for enhanced gender balance in corporate boards to leverage the benefits of gender diversity. However, the roles of board independence and size should not be ignored because the two characteristics are essential in fostering enhanced board diversity. Therefore, this study recommends that the CMA's guidelines should allow organizations to manipulate the board sizes and independence to achieve optimal financial performance. Organizations should balance the

ratio of executive and non-executive directors because managers have significant knowledge of firms' operations and needs. The study also recommends that firms listed on the NSE should restructure their boards to create balanced gender composition. Specifically, the firms should ensure that the ratio of women to men in corporate boards is 1:1 to leverage the expertise and experience of both genders. Diversity increases the variety of opinions, ideas, and oversight, which enriches the quality of decisions and strategic directives by organizations; consequently, diversity increases the financial performance of corporations.

6 Declarations

6.1 Competing Interests

The author of this study declares that this paper has NO conflicting interests. Specifically, the author has no affiliations with or associations with any organization or learning institution with financial interests regarding the subject matter (this study/paper) or the contents of this manuscript.

6.2 Publisher's Note

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