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An Assessment into the link between Board Diversity and Accounting Quality among firms listed in the East African Community Securities Exchanges

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Abstract

The study sought to analyze the effect of board diversity on the quality of accounting for firms listed at the East African Community securities exchanges. Data was obtained from 53 companies whose shares are publicly listed in the EAC stock exchanges for the years 2013 to 2020. Secondary and primary data was utilized to test the study's hypothesis. Multiple regression analysis was applied to analyze the research's hypothesis. Director profiles in the annual reports provided board diversity data, adoption of IFRS was obtained through an IFRS disclosure index derived from IASB disclosure checklists, quality of accounting information was assessed by value relevance of financial information, fundamental qualitative aspects of financial information and management of earnings. The study's results establish a strong association between diversity in boards and accounting quality as assessed by the three indicators of management of earnings, fundamental qualitative attributes and the value relevance of accounting information for the listed firms in EAC, it was further established that the diversity in boards in EAC firms is generally low. The results confirm relevance of the upper echelons theory in East Africa. It can be concluded therefore that board diversity influences the quality of financial reporting for EAC listed firms. The study contributes to the existing knowledge on board diversity and quality of financial reporting by documenting the findings for EAC listed firms. The study however relied on the observable aspects of diversity attributes ignoring the unobservable which may equally have a significant effect. Capital markets authorities in the EAC should develop policies to enhance the diversity in boards in order for the EAC firms to realize the full benefits of having diverse boards. Future scholars can consider applying other methodology different from the regression analysis adopted in the study which may yield different results from the ones documented in the current study.

Keywords: Board diversity, accounting quality

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Introduction

Diversity can be defined as the disparity, separation and variability of the unit members (Harrison & Klein, 2007). Diversity may be explained as the differences in opinion or position amongst the unit members due to their attitudes and values. Diversity, as a variety is represented by differences in relation to category or kind in relation to knowledge, experience and information among the members of an entity or unit.

Jackson et al. (2003) defined diversity as distribution of individual characteristics and traits of the independent member of a unit of work. Diversity of boards therefore relates to boards having heterogenous membership in respect to: gender; age; race; nationality among other traits. Diversity can mainly be generalized into two, demographic and cognitive: demographic diversity are the observable traits defined as per ethnicity, race, age, religion, education level, functional background, director tenure and gender while cognitive diversity relates to variations in personality and style of thinking. The current study analyzes demographic traits of the board.

Diversity in boards is assessed on the observable traits of the directors. Diversity benefits include: improved decision making through the array of knowledge available; overcoming group thinking and premature consensus; and the attainment of the desired social value of equality. Diversity may lead to less effectiveness in organizations, less sharing of information, lack of cohesion and cooperation among groups. Use of diversity quotas more than experience consideration may negatively affect performance. Effect of diversity on firm outcomes has been analyzed giving inconclusive results (Rhode & Packel, 2014). Director's governance effectiveness is contingent on their tenure as directors with the highest effectiveness recorded by directors with tenures of more than 7 years (Brown, et al., 2017). The effect of functional diversity of the top management teams on firm outcomes have returned inconsistent empirical results (Cannella et al. 2008). Directors with accounting background serving as finance experts in boards enhance accounting quality and market efficiency (Huang, et al., 2016). Directors of foreign nationalities are more independent than the local directors and such firms report higher quality information (Ruigrok, et al., 2007). Further, directors drawn from diverse nationalities enhances firm performance when controlling for institutional, firm level, cultural and the board characteristics together with nationalities of directors (Delis, et al., 2017). Empirically, demographic diversity has been analyzed using observable traits like age and gender among others while cognitive diversity has been analyzed in respect to personality traits (Hambrick & Mason, 1984). Based on the Upper Echelons Theory, firm outcomes are indicative of its board and senior management attributes (Finkelstein et al., 2008 and Hambrick & Mason, 1984). Board's experience, expertise and skills significantly affect the financial information quality reported by firms (Davidson et al., 2005, Dechow et al., 1995 and Klein, 2002).

Accounting quality relates to the correctness of financial statements in communicating information relating to operations of a company, or level of compliance by the financial statements to established accounting standards, or the level to which a company's published financial reports convey the entity's core operations (Nasser & Nuseibeh, 2003; Robinson & Munter, 2004; Biddle et al., 2009). Accounting quality is also defined as per fundamental qualitative characteristics developed by IASB as qualities of accounting information that underly use ability of accounting reports in making decisions (IASB, 2010). The two definitions above capture the nature of financial information as reported in financial statements. Accounting quality, however, is a rational perception preference of accounting information user. This arises from the different users of financial data having different preferences and tastes as a result, different judgments of accounting quality.

Research Problem

Historic failures by companies such as the Marconi, Royal Ahold and Enron resulted in doubts as to the financial information quality indicative of the prevalence of weak governance in corporate companies (Bowen et al., 2008). In Kenya, suspicion of financial reporting improprieties have been identified in CMC Kenya, Mumias Sugar and Kenya Airways which have witnessed erosion of shareholder wealth and consequent suspension or delisting from the bourse (Iraya et al., 2015). In responding to the financial improprieties emphasis has been put on the appointment of senior management be ensuring they are diverse in terms of skills, age, experience and education. The effect of such diversity on the outcomes of firms has led to mixed findings due to economic environment, approach of research and company type.

The gender diverse impact on the earnings quality in the US for the period between 2001 to 2007 was undertaken by Srinidhi, et al. (2011). Earnings management was applied to assess quality of earnings. It was observed that companies having female representation in their boards reported lower incidences of managing earnings. The effect of director tenure on the quality of financial reports in Korea was analyzed by Kim and Yang (2014), discretionary accruals, persistence of earnings and earnings response coefficient were the indicators of quality of financial reporting, the authors reported a negatively significant association between director's tenure and the discretionary accruals, a positive association of director tenure and both earnings persistence and earnings response coefficient. The gender diverse effect in boards on the accounting improprieties in the US was studied by Wahid (2018), covering 6,132 quoted firms for 10 years (2000 – 2010). The study's results reveal that gender diversity in boards resulted in lesser mistakes in financial reporting by firms, the effect however tends to decline for higher diversity due to the existence of dynamics of groups. The above studies were however conducted mainly in the US and Korea which fall in the category of developed countries which is associated with higher quality of regulations as compared to the EAC countries. In addition, the above studies mainly analyzed one aspect of diversity (gender) ignoring other board diversity attributes such as nationality, education, age among others which may impact on the quality of financial results being reported.

Locally, Omoro (2014), studied the impact of top management diversity, corporate voluntary disclosures and the discretionary choice on quality of accounting information for government owned companies. Qualitative attributes of accounting information, disclosure quality, management of earnings and the timeliness of accounting information were the indicators of quality of financial information. The author established that the age of directors, tenure and functional background of the top management team influenced the qualitative attributes of accounting information while gender and education had negative association with the qualitative attributes for the Kenyan firms. There were minimal diversity effects on both the timeliness and quality of earnings. The study therefore reported inconclusive findings as to the impact of a diverse senior management on the quality of earnings for Kenyan parastatals. The study did not consider the group dynamics aspect by adopting a unified measure of diversity combining all the attributes. Further, the study analyzed government parastatals whose governance is at the whims of the relevant ministry which inhibits the independence of the directors in making decisions.

From the above review, the results have been inconclusive affecting generalizability of the findings of the studies on board diversity effect on accounting information quality where different indicators of accounting quality reporting different conclusions. Further, arising from above, the studies analyzing the impact of diversity in boards on financial information quality has mainly been analyzed for the developed nations that are associated with higher quality of regulations and advanced economies consequently the findings may differ with that of the East African nations which generally have weaker enforcement mechanisms. The

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study's objective was therefore to answer: what is the effect board diversity on the quality of accounting information for listed companies on East African Community stock exchanges?

Research Objective

The main objective of the study was to evaluate the impact of adopting International Financial Reporting Standards on the relation between diversity in boards and accounting quality of companies quoted at the East African Community securities' exchanges

Theoretical Review

Upper Echelons Theory

The theory documents the impact of the personality traits of top management levels on firm's performance. The idea behind this is to consider the impact of top management unit as a whole as opposed to their individual attributes in order to gain insights on the organization (Hambrick & Mason, 1984). This was further confirmed by Goel and Thakor (2008) who observed that top management's personal attributes affect their choices. Top management teams' can be analyzed in terms of their personality and professional experience.

As per the upper echelon's theory, strategic choices, corporate outcome and firm performance are determined by the personal attributes of their management (Hambrick & Mason, 1984). The assumption is that higher level managers will act based on personal understanding of available strategic choices available and corresponding interpretations which are attributed to their personality types, values and experience (Hambrick, 2007). Prior UET studies analyzed the TMT attributes of functional background, age, professional experience, level of education on the firm's performance and outcomes.

The theory is useful in explaining the role played both the individual and team factors impacts on decisions made by a firm's executives (Nielsen, 2010). It blends with different theories like agency making it possible to broaden the analysis of the top management diversity on accounting quality. Six traits that are observable were identified by Hambrick and Mason (1984) this include: professional experience; financial status; functional background; education levels; age and socio-economic position that have been applied in analyzing leadership and heterogeneity in the board of directors.

Researchers have analyzed the definition and composition of the top management team. TMTs can be identified in relation to official titles that can be obtained from the documents that are available publicly (Finkelstein & Hambrick, 1996). As per Pitcher and Smith (2001) authority in decision making is often not properly define the TMT. Two general traits that influences top management decisions, that is, the observable traits and the psychological aspects that are not easy to quantify. The current study was anchored on UET due to the fact that quality of information reported is expected to be determined by the personal traits of its managers. The current study adopted the observable traits of the board in assessing a board's diversity. The UET has been criticized for only emphasizing on the senior management ignoring other key factors like staff emotional stability, motivation and other social contributors that affect the accounting information quality. Founded on UET, the study examined the impact of the board's diversity on the quality of financial information, it is expected that a diverse board should report higher quality financial reports.

Agency Theory

Agency theory documents the relations of the principal and an agent, where the owners (shareholders) or the principals of the firm, hires an agent to undertake some work, the theory was put forward by the works of Jensen and Meckling (1976), they argued that ownership separation and control leads to problems of agency because the management being agents will not always act with the principals' interests; this can be attributable to both parties pursuing different interests. Agency problems arise when agents act on their own interest, resulting in agency costs to monitor the principal's expenditure.

Existence of managerial incentives in order to take decisions that maximizes value reduces inefficiencies in firms (Jensen & Meckling, 1976). The agency costs arise out of differing interest between firm owners and management. The agency costs are inclusive of: free cash flow costs and debt; residual loss; bonding costs and costs of monitoring. The principal has to incur costs of monitoring in order to observe and to control the behavior of the agent. The firm's managers generally tend to be more knowledgeable than any other stakeholder of the firm. The inability of the firm's outsiders to pass judgement in relation to financial performance of the firm and classify performance as moderate the company's stock is likely to be undervalued. The asymmetry of information between outsiders and insiders results to the need for firms to incur monitoring costs which may consists of: generation of credible financial reports; contracts for compensation of the firm executives including contract termination or replacement costs and financial audits.

A firm's shareholders due to their numbers usually delegate the management of business operations to the board of directors and managers who are both shareholders agents (Clark, 2004). Agency theory illustrates a close relation of organizational and financial practices including financial reporting (Jensen & Smith Jr., 2000). The criticism of this theory is that it is based premise that a principal expects an agent to work for his/her interest which may not necessarily be the case since the agent may decide to pursue his/her own goals and interests different from the principal's resulting in agency conflicts. Further, firms incur monitoring costs relating to the financial statement preparations not necessarily as a solution to the agency conflicts since there are other interested stakeholders such as regulators who are in need of the financial statements. The board may try to avoid agency conflicts through management of earnings using IFRS flexibility on discretional choices especially when the firm profits decline or in relation to losses, which compromise the quality of financial reporting. One remedy available to the shareholders in such cases is the use of the legal systems to enforce their rights.

Resource Dependence Theory

This theory is traced to Pfeffer and Salancik (1978), it posits that corporate boards serve a linking role between the firm and the external parties so as to address its environmental dependence. Pfeffer and Salancik (1978) suggested four key benefits arising due to external links: first, resource provision such like information and skills; secondly, communication channels creation to aid in communicating to its important constituents; thirdly, offering commitment support to external environment key stakeholders; and fourth, legitimacy creation for the company. Hillman, Cannella and Paetzold (2000) expanded the four benefits and developed taxonomy of various types of directors providing the firm with diverse resources like: its insiders (internal stakeholders), business consultants, support experts and communal influence. Hillman, et al. (2000) extended the theory by proposing that a variety of directors provides varied resources of benefit to the company. Therefore, diversity in boards provides resources of a high value; as a result, high quality information is expected.

Furthermore, various forms of diversity have different importance. The presence of bankers in boards positively influences the level of debt in firms, since bankers are expected to provide their expertise and networks to various debt markets (Booth & Deli, 1999). Directors with backgrounds in politics and law are most likely positions in the boards of firms that sell to governments or being regulated by governments (Agrawal & Knoeber, 2001). Female directors and directors from ethnic minorities equally bring varied usefulness to firms. Hillman, et al. (2002) observed that African-American female directors are to a less extent likely to become experts in business as compared to the African-American male directors while both African-American male and female directors are less likely to become experts in business than the Caucasian women directors. Male Caucasian directors' more likely become experts in business as compared to either the African-American or female directors (Carter, et al., 2010).

Ethnicity and gender are treated separately under the resource dependence theory since female and ethnic minority directors have diverse backgrounds with varying labor capital resulting in different abilities in addressing various dependencies on the environment. The resource dependence theory presents a basis for the theoretical argument for a strong case for diversity in boards. Diversity in boards improves information provision by boards as a result of the unique and diverse representation of the directors in boards (Carter et al., 2010). Gender and ethnicity diversity produce unique information sets available to the management of a firm that is useful making better decisions. The existence of a diverse board provides a firm with access to strategic constituents within the external environment. Therefore, organizations with diverse boards generally have access to a wider talent pool (Carter et al., 2010). Diversity of directors in boards brings unique nontraditional perspectives problems since they are not likely to have vested interests since they are not insiders. Diversity type across countries and cultures will differ widely. Other forms of demographic diversities in boards include age and religion which have varied importance across different nations and cultures (Carter et al., 2010).

Empirical Review

Effect of a board's gender diverse attribute on quality of earnings of US firms between 2001 to 2007 was done by Srinidhi, Gul and Tsui (2011). Multiple regression analysis was used in testing study's research hypothesis. Management of earnings towards a target and discretionary accruals and were used to measure the earning's quality. The results of the current study establish that company boards having female directors report lower incidences of management of earnings and consequently high quality of earnings. The authors however did analyze the effect of IFRS and legal mechanisms on the quality of earnings.

In Kenya, Omoro (2014) analyzed the effect of the senior management team (TMT) diversity, firm's voluntary disclosures (CVD) and discretionary choices on quality of reporting of parastatals in Kenya. Management of earnings, quality of disclosures, timeliness and IASB's qualitative characteristics were used to measure FRQ. Data was obtained from secondary sources from 2004 to 2013. Blau index and coefficient of variation were applied to assess TMT diversity. Data was analyzed through use of multiple stepwise regression analysis and correlation. The study reported that director age, functional background and tenure in the TMT and CVD influence fundamental qualitative characteristics while TMT gender and education were negatively associated with fundamental qualitative characteristics. Minimal effects were observed on earnings quality and timeliness. Disclosure quality revealed insignificant results. The study therefore reveals mixed effects of TMT diversity on accounting quality.

Director's tenure impact on quality of financial reports in Korea was analyzed by Kim and Yang (2014). The study applied the modified Jones's (1991) model in measuring the management of earnings, earnings response coefficient (ERC), persistence of earnings as proxies for financial information quality. The authors analyzed 5502 data points drawn from the Korean listed firms excluding financial firms. Test of hypothesis was done using univariate and multivariate analysis. A negative and significant relation between tenure of directors' and quality of reporting as assessed by earnings management was established. Earnings persistence and ERC establish a positive relation with the tenure of directors. The study failed to take into consideration the effect of adopting IFRS on a board's tenure diversity and earnings management.

The effect of gender diverse boards on financial misconduct in firms was analyzed by Wahid (2018). The study analyzed 6,132 listed US companies for 10 years (2000 to 2010). Univariate and logit analysis were applied to test hypothesis of the study. The study found that gender diverse boards record less cases of mistakes in their financial reporting and additionally lower cases of fraud, this was applicable for both pre and post regulation (Sarbanes-oxley). The benefit of higher representation female directors in boards however was found to reduce at higher levels of gender diversity which is attributable to group dynamics within the board. The study was conducted in the US which has a different regulatory framework from that of East Africa, further, adoption of IFRS was also not analyzed in the study.

The effect of women directors' financial background on the quality of earnings was analyzed by Zalata, et al. (2022) in quoted non-financial firms in the United States for the year 2007 to 2013. Firms whose data had less than 20 company-year observations were also not considered; a total of 5398 firm-year observations was considered for the final analysis. The study used a performance adjusted Jones (1991) model to measure discretionary accruals. Findings of the study establish that firms associated with women directors having financial backgrounds with fewer outside directorships reported lower management of earnings by firms in the US. Over commitment of female directors by having many other directorships lowers the monitoring ability of female directors. No evidence was established to link female directors with no financial background whether or not they have other outside directorships. The study however failed to incorporate the impact of adopting IFRS adoption and the legal mechanisms on management of earnings. Further, gender diversity was the only board attribute analyzed ignoring other aspects like age, tenure, geographical and education levels.

Research Methodology

Generation of either explanatory or causal relations is one of the aims of positivist research, leading to predicting phenomena that is being investigated, this is grounded on an objective inspection, truthful backed evidence arrived at from a clear, documented method (Blumberg et al., 2005). The current study adopts positivism research philosophy since it was based on existing knowledge base (theories), from which a relevant review of literature, development of a conceptual framework followed by scientific formulation of hypothesis out of which the observations were then deduced so as to falsify the formulated hypothesis and verified by use of empirical tests.

The research design forms basis for conducting research. Three research designs exist: causal, descriptive and exploratory. Since the objective of the study was to establish the association between diversity in boards and the quality of financial reporting, it employed the descriptive research (Sanders et al., 2007). The targeted population of the study consisted all the quoted companies in East Africa Securities' exchanges, adding up to one hundred and thirteen (113) companies as at 31st December, 2019. The current study examined 53 firms quoted companies in EAC after elimination of 20 cross-listed firms and firms whose annual reports were not consistently available for the 8 years of the study.

Out of the listed firms' annual reports in the EAC companies for the period covering 2013 to 2020, the current study obtained secondary data about: the directors; qualitative aspects of financial information; managing of earnings; and the value relevance of the reported company financials. Primary data was sourced from firm finance officers (CFOs) and senior finance managers of listed firms and was utilized to validate the secondary data on qualitative attributes of financial information. Questionnaires were administered to the finance managers of listed companies in order to validate qualitative attributes data.

Data Analysis

To test for the impact of diversity of the board on the quality of accounting information on listed firms in EAC was examined using regression analysis. Accounting quality was assessed using: the qualitative attributes; value relevance and management of earnings. This is highlighted in Table 1 below.

Table 1: Research Hypothesis Summary

Objective	Hypothesis	Analytical Model	Interpretation
To assess the impact of board diversity on quality of accounting	Board diversity does not significantly affect AQ	OLS Model $AQ_1 = \beta_0 + \beta_1 BDIV + \varepsilon_1$	Sig<5%, reject hypothesis. Relationship exists if β_1 is significant

Descriptive Statistics

The study adopted Blau's index to determine the diversity of the directors for quoted firms. The diversity of boards was assessed on the basis of age, gender, tenure, educational background, functional background and geographical attributes of the directors. The study observed that the most diverse attributes were director tenure with and index of 0.72, functional diversity with an average index of 0.68 and educational diversity index of 0.57. The rest of the attributes of geographical background, gender and age diversities had indices less than 0.5 indicating low levels of diversity. Age diversity was positively skewed (0.71) meaning that the mean index of age was greater than the median. Functional diversity, geographical diversity, gender diversity, education diversity and tenure diversity were negatively skewed (-0.731, -0.187, -0.743, -1.170 and -0.391 respectively) this means that the mean values of the indices were less than the median index values for the diversity attributes above. Functional diversity, education diversity and age diversity had positive kurtosis values of (0.317, 1.094 and 2.199 respectively) meaning the distribution is more peaked than normal distribution. This therefore necessitated the standardization and normalization of the distribution before testing of the research hypothesis. Table 2 below summarizes the above findings.

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Table 2: Descriptive Statistics for Board Diversity of Listed Firms in East Africa

	N	Min	Max	Mean	Std. Dev.	CV	Variance	Skewness		Kurtosis	
							Statistic	Statistic	Std. Error	Statistic	Std. Error
FUNC	424	0.38	0.84	0.68	0.09	0.13	0.01	-0.73	0.12	0.32	0.24
GEOG	424	0.00	0.50	0.25	0.20	0.79	0.04	-0.19	0.12	-1.58	0.24
GEN	424	0.00	0.50	0.30	0.14	0.45	0.02	-0.74	0.12	-0.12	0.24
EDUC	424	0.00	0.80	0.57	0.15	0.27	0.02	-1.17	0.12	1.09	0.24
AGE	424	0.00	0.44	0.18	0.06	0.33	0.00	0.71	0.12	2.20	0.24
TEN	424	0.07	1.00	0.72	0.20	0.27	0.04	-0.39	0.12	-0.72	0.24
Valid N (listwise)	424										

The study's intervening variable was the International Financial Reporting Standards (IFRS), which was examined using the IFRS compliance index. The results show that the IFRS standards are generally complied with, as evidenced by the mean of 78 percent. This is due to stringent compliance requirements that quoted companies have to comply with. The least score was 46% while the highest score was 93%. The variance (0.006) and standard deviation (0.07) indicate low levels of variations on IFRS data. Results of the coefficient of variation indicates a variability of 9% from the mean, indicating a low level of variability attributable to the use of IFRS based reporting templates. The IFRS descriptive statistics are outlined in Table 3 below.

Table 3: IFRS Descriptive Statistics

	N	Min	Max	Mean	Std. Dev	CV	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic		Statistic	Std. Error	Statistic	Std. Error
IFRS	424	0.46	0.93	0.78	0.07	9%	-0.623	0.12	0.72	0.24
Valid N (listwise)	424									

Research Findings and Discussions

This study's objective was formulated so as to assess the effect of diversity in boards on the accounting quality of quoted firms in the East African Community securities exchanges. It is from this objective that the first hypothesis was developed, diversity of boards has no significant impact on the accounting quality of quoted companies within the East African Community securities exchanges. This was informed from both the literature reviewed and the theoretical contribution of Hambrick and Manson (1984) which linked firm outcomes and the demographic diversity of the company's top management team in relation to: education; age, functional background, tenure, gender and the functional background. The study's hypothesis study was formulated as follows:

H_{01}: Board diversity does not significantly influence the quality of accounting information for quoted companies in the East African Community

The accounting quality was assessed using three indicators of financial reporting quality as measured by: value relevance; managing earnings and the qualitative attributes of accounting information. The sub-hypothesis of the study's hypothesis one highlighted below are discussed in the section that follows.

H_{01a}: Board diversity do not significantly influence management of earnings of quoted companies in the East African Community

H_{01b}: Board diversity do not significantly impact on the value relevance of quoted companies in the East African Community

H_{01c}: Board diversity do not significantly influence the fundamental qualitative characteristics of listed companies in the East African Community

Effect of Board Diversity on Earnings Management

The study's first sub-hypothesis of hypothesis one was examines through use of multiple linear regression where the board diversity indicators of director age, director tenure, gender, education, functional background and geographical diversity were averaged to obtain a composite index which was regressed against the management of earnings as measured by the discretionary accruals of the quoted companies in the East African Community securities exchanges. The findings of the linear regression tests are depicted in Table 4 below.

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Table 4: Regression Results of Board Diversity on Earnings Management

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.183[a]	0.033	0.031	15.0972462	0.033	14.581	1	422	0.000

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3323.372	1	3323.372	14.581	.000[b]
	Residual	96185.128	422	227.927		
	Total	99508.500	423			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-22.774	5.550		-4.103	0.000	-33.683	-11.865
	BDIV	46.650	12.217	0.183	3.818	0.000	22.637	70.664

a. Predictors: (Constant), BDIV
b. Dependent Variable: DISCACC

The regression of the board diversity index of diversity and management earnings as assessed by use of discretionary accruals results to a positive significant association between diversity in boards and accounting quality as was assessed by discretionary accruals (Coefficient = 0.183, F-value = 14.581, Sig = 0.000 which is lower than $\alpha = 0.05$). The model however only explains 3.1% of the variations in accounting quality as measured by discretionary accruals (R^2= 0.031) implying that the model is a poor predictor of discretionary accruals. The coefficient (unstandardized = 46.650, sig = 0.000) indicates that a change by one unit of a board's diversity results to increase of the discretionary accruals by 46.650 units. Therefore, a significant positive relation exists between diversity in boards and management of earnings. Consequently, the hypothesis that board diversity does not significantly influence financial information quality as measured by management of earnings is not confirmed. The model can be rewritten as follows:

$$\text{Disc Acc} = -22.774 + 46.650\text{BDIV}$$

The board diversity yielded a statistically significant model predicting earnings management for East African quoted companies, the results of the study is consistent to the findings of Srinidhi et al. (2011) establish that companies led by women directors are associated with better financial reporting discipline and therefore high-quality financial reports. Further, Kim and Yang (2014) reported that director tenure is negatively related to management of earnings. Wahid (2018) established a significant negative association of gender diversity in boards and manipulation of financial reporting therefore higher quality financial reporting. The current study's results are consistent to the findings by Omoro (2014) which reported significant impact diversity in boards on management of earnings in Kenya.

Effect of Board Diversity on Value Relevance

The study's second sub-hypothesis of hypothesis one was examined using linear regression analysis where the board diversity indicators of director age, director tenure, gender, education, functional background and geographical diversity were averaged to obtain a composite board diversity index then regressed against the value relevance of the quoted companies in the East Africa Community securities exchanges. The results of the linear regression tests are highlighted in the table below. A discussion of the model results follows after the Table 5 below.

Table 5: Regression Results of Joint Board Diversity Indicators on Value Relevance

Model Summary[b]

			Adjusted R Square	Std. Error of the Estimate	Change Statistics				
Model	R	R Square			R Square Change	F Change	df1	df2	Sig. F Change
1	.178[a]	0.032	0.029	8.0081121	0.032	13.796	1	422	0.000

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	884.750	1	884.750	13.796	.000[b]
	Residual	27062.801	422	64.130		
	Total	27947.550	423			

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-6.941	2.944		-2.358	0.019	-12.728	-1.155
	BDIV	24.070	6.480	0.178	3.714	0.000	11.332	36.807

a. Predictors: (Constant), BDIV

b. Dependent Variable: VREL

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The board diversity and value relevance of financial information regression, resulted to a significant model in explaining the association between board diversity and financial information quality as examined by value relevance (F-value = 13.795, Sig = 0.000 which is less than $\alpha = 0.05$). The board diversity index explains 3.2% of the variations in financial information quality as indicated by value relevance of accounting information (R^2= 0.032). The coefficient (unstandardized = 24.070, Sig = 0.00) indicates that a change by a single unit of diversity of boards results to a change in value relevance by 24.070 units. From the above, the hypothesis that board diversity do not significantly influence financial information quality of quoted companies in the East African Community securities exchange, as measured by value relevance of financial information, is not confirmed. It can therefore be concluded that the board diversity significantly affects quality of accounting as measured by value relevance. The model can be rewritten as follows:

$$Vrel = -6.941 + 24.070\ BDIV$$

The board diversity index yielded a statistically positive and significant association of the diversity in boards and value relevance of listed companies in the East African securities exchanges. This reveals that for East African listed firms, a firm with a board of diverse composition of directors the accounting information reported significantly affects the market prices of its shares. The findings of the study were consistent to those of Velte (2017) and Siekkinen (2017) which found that the existence of diversity in a company's board has a positive and significant association to the market prices of the firm's shares. Therefore, it can be concluded that in a diverse board the financial information is considered value relevant for listed firms in the East African community securities exchanges.

Board Diversity Effect on Qualitative Characteristics

The third sub-hypothesis of hypothesis one was analyzed by use of the linear regression analysis where the board diversity indicators of director age, director tenure, gender, education, functional background and geographical diversity were averaged to get a composite board diversity index then regressed against the fundamental qualitative characteristics of the listed firms in the East African Community securities exchanges. The findings of the regression output are highlighted in the table below. A discussion of the model's results follows after the Table 6 below.

Table 6: Regression Results of Board Diversity on Qualitative Characteristics

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.100[a]	0.010	0.008	0.0515077	0.010	4.290	1	422	0.039

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.011	1	0.011	4.290	.039[b]
	Residual	1.120	422	0.003		
	Total	1.131	423			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	0.581	0.019		30.668	0.000	0.543	0.618
	BDIV	0.086	0.042	0.100	2.071	0.039	0.004	0.168

a. Predictors: (Constant), BDIV

b. Dependent Variable: QXSTC

The regression output indicates the model significantly explains the association between the diversity of boards and financial information quality as indicated by the qualitative characteristics (F=4.290, sig = 0.039, which is less than $\alpha = 0.05$). The model however, only explains 1% of the variations in qualitative characteristics of financial information attributable to board diversity (R square = 0.010), meaning that 99% of the variations in qualitative characteristics are not explained by the model adopted. The unstandardized coefficient of board diversity indicates a change in a single unit of board diversity results to a change of 0.0086 units of the qualitative characteristics of accounting information (B=0.086, sig = 0.039). From the foregoing, the hypothesis that the relationship between board diversity do not significantly influence the fundamental qualitative characteristics of listed companies in the East African Community is therefore not confirmed.

$$\text{Qualitative Characteristics} = 0.581 + 0.086\ \text{BDIV}$$

The composite board diversity index of the board diversity reveals a statistically significant association between diversity of boards and the qualitative attributes of financial information for quoted companies in East Africa. The regression output indicates existence of a relation between diversity of boards and qualitative characteristics of accounting information. Implying that a board which is diverse is likely to report more qualitative accounting information as compared to a non-diverse board. Therefore, the hypothesis that board diversity does not influence significantly the qualitative characteristics of financial information was not confirmed. The above results are consistent to the results of Omoro (2014) which established that director age, functional background and tenure in the top management team positively influence fundamental qualitative characteristics while gender and education were negatively associated with fundamental qualitative characteristics in Kenyan firms.

Conclusions, Limitations and Further Study Areas

Arising from the study's tests of hypothesis, the conclusions discussed below can be drawn from the study. The study concludes there exists a significant relation between diversity of boards and the quality of accounting for companies listed in the East African securities exchanges. Therefore, higher diversity in boards enhances the financial reporting quality for listed firms in East Africa. Specifically, higher board diversity lowers incidences of managing earnings in firms. In addition, higher diversity in boards makes accounting information more value relevant for East African listed firms. A diverse board also affects the fundamental qualitative properties of financial information reported by the listed firms in Kenya, Uganda, Tanzania and Rwanda.

The study was guided by testable hypothesis that were to validate or falsify a theory. The current study contributes to the validation of theories on diversity in boards attributes and their effects on firm outcomes, financial reporting, and quality of financial information among other firm outcomes. This further helps to understand the association between board diversity, accounting standards, legal enforcement and accounting quality. Specifically, the upper echelons theory emphasizes the influence of the managerial traits on the firm outcomes and the management of discretionary choices that may result in the management of earnings by boards. The significant relation between diversity of boards and the quality of financial information confirmed that upper echelons is relevant for firms quoted in East Africa.

The study's findings will help capital market authorities and stock markets in the East African Community put in place measures to foster diversity on boards of directors, as well as raise awareness among listed companies about the need of diverse boards. Regulators can also adopt policies to increase board diversity and tighten the reporting structure to enhance the quality of accounting data reported. This can be accomplished by establishing minimum disclosure rules for publicly traded companies.

The current study was based on the demographic traits of board of directors which only looks at the observable traits. Specifically, the study considered age, gender, tenure, functional background, education and geographical diversities to assess board diversity. This omitted the non-observable traits which may be significant in explaining the board diversity trait of boards. Other diversity traits such as ethnicity, religion and culture may have returned different results from the ones documented in this study.

Future researchers should consider other data analysis and methodological approaches other than mainly the regression analysis which assumes linearity of the relation of diversity in boards and quality of financial information, the relationship may not be linear which may account for the low predictability of the model adopted for the current study. Other data analysis approaches such as structural equation modelling and non-linear regression analysis may yield more robust findings than the results documented by the study.
The current study considered quoted companies in the East African Community to analyze the relation of diversity in boards and accounting quality. The listed companies analyzed were mainly privately owned or government owned and are often characterized by minimal directors' turnover which affected the outcome of the current study. Future researchers can consider other firms other than listed firms such as non-listed entities or even family run entities which are likely to have more diverse boards due to the need to have professional skill that are lacking in the family; therefore, such firms may yield deeper insights in order to understand board demographics and their relationship with accounting quality.

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