MODERATING ROLE OF BOARD DILIGENCE ON THE RELATIONSHIP BETWEEN BOARD DIVERSITY AND EARNINGS MANAGEMENT AMONG SELECTED LISTED FIRMS IN KENYA

BY

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DECLARATION

DECLARATION BY CANDIDATE

This is to declare that this thesis is my original work and has not been presented to any other University for examination.

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DEDICATION

To my children Tyron, Brenda and Ian and my hubby Paul in recognition of their dedication to education, I dedicate my thesis to my mother for impacting me with life skills. To my family and friends for their moral support and confidence in me.

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ABSTRACT

Board diversity as a component of corporate governance has gained popularity among corporate finance experts and practitioners. Although there has been extensive literature on the topic of corporate governance, few studies of this research have examined the influence of board diversity on earnings management. The study thus seeks to analyze how board diversity influences earnings management in Kenya. Specific objectives of the study were; to establish effect of directors' experience, age, education, ethnic and gender diversity on earnings management. Although there are various theories related to board diversity, the current study was under pinned by agency theory, social identity theory as well as upper echelon theory. The study used both descriptive as well as explanatory research designs. The study targeted all the listed firms 63 at Nairobi security exchange. This research employed secondary data from companies listed in the NSE. The 48 firms used in the study are those that have continuously traded for a period of ten years from 2006 to 2015. Data was analyzed using STATA to determine regression. Multiple regression model assumptions were tested for conformance with the data, guaranteeing the reliability of the outcomes. In the selection of the appropriate method, Hausman test was done. The results supported the use of random effects GLS model. The findings of the study established that board diligence, education diversity (β =0.291), experience diversity (β =0.153) and nationality diversity (β =0.208) portrayed not only a statistically significant but also a positive effect on earnings management in Kenyan listed firms ($p<0.05$). On the other hand, and gender diversity (β =-0.346, $p<0.05$) evidenced a statistically significant but a negative effect on earnings management. Finally, age diversity revealed a non-statistically significant influence on earnings management ($p>0.05$). Board Diligence positively moderated education diversity (β =0.0.967, $p<0.05$), nationality diversity (β =0.365, $p<0.05$) and gender diversity (β =0.047, $p<0.05$), while negatively moderated experience diversity(β =-0.322, $p<0.05$)and age diversity(β =-0.331, $p<0.05$) The overall squared (R^2) was at 52.8 %. The study had an overall significance of 0.0164 implying that all variables of interest were statistically significant in explaining earnings management of the selected listed firms in NSE. In conclusion, Earnings management has contributed to the demise of many institutions due to false or misleading financial statements. A diverse board is essential for reliable financial reporting and it is particularly important to ensure that variety of generations are represented on the board. Research has shown that having employees of varying ages has a beneficial effect on the way revenue is handled. The level of diligence displayed by the board of directors is also a significant moderating element. Companies should take these aspects into account when formulating standards on board diversity. Therefore, the current study recommends there is need for firms through their accounting bodies/unions to re-evaluate the principles that may sanitize the accounting procedures and circulate among directors who have been in the system for longer periods and have advanced in terms of their age. The study also recommends that there is a need to estimate the relationship further utilizing firm characteristics like the firm age and even leverage of the firm to see if it influences actions of the directors and the reports they provide. In addition, CMA need to lay out specific rules for how to incentivize managers including allowances that are based on merit, enforce their limitations on executive ownership of company stock and spelled-out procedures for trading between publicly traded firms and their affiliated businesses. Moreover, the study also suggests that executive remuneration be less aggressively tied to performance in order to avoid inducing managers to falsify reported earnings in order to boost their income, as its influence on company performance is considered to be overestimated. Additionally, policies should be put into place to reduce both education and ethnic diversities as they have a negative effect on earnings management. Finally, companies should ensure that gender balance is inculcated into the boards as gender diversity has a positive impact on the earnings management.

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LIST OF ACRONYMS

SOX-Sarbanes-Oxley Act

SEC-Security Exchange Commission

U.S-United States

GAAP-Generally Acceptable Accounting Principles

CEO- represent Chief Executive Officer

FMCG means Fast moving consumer goods

RM-Real Activities Management

ROI-Return on investment

ROE-Return on equity

CMA-Capital Market Authority

NSE-Nairobi Stock Exchange

FASB-Financial Accounting Standard Board

TMT-Top Management Team

DEFINITION OF TERMS

Earnings Management: Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial report to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers

Age Diversity: Refers to the age of the board members in the selected firms.

Board Diligence: This refers to the meetings conducted in a year by the directors.

Educational Diversity: This is education level attained by the board of directors.

Ethnic Diversity: This refers to the combination of ethnic groups by the board of directors in various firms.

Experience diversity: This refers to the number of years either functional, industry specific or specialized knowhow for the board members of a firm

Gender Diversity: Refers to sexual category of the board members

Smoothing Accounts: The practice of using accounting methods to smooth out seasonal and annual variations in net income.

CHAPTER ONE

1.0 Introduction

The section discusses the key research variables, explores the problem statement and highlights the objectives of the research, presents the significance and scope of the study.

1.1 Background of the Study

Using insights from agency theory that positions the board of directors as an internal check on management's potential for opportunism at the expense of shareholders, we may say that the board plays this role (Hillman and Dalziel, 2003). In order to fulfill their fiduciary duties, boards of directors must exercise strict oversight over executive decisions and operations, including requiring accurate financial reporting. Based on the findings of (Healy and Wahlen, 1999), the board has additional mandate to deter the possibility of a deliberate alteration of information in the financial statements to deceive investors and other stakeholders on the firm's true financial health or to obtain contractual advantages that are heavily dependent on false accounting numbers.

Accruals appears as the main crucial earnings management techniques which is applied by members in the management team to give a rise or drop in the inflows (Bergstresser & Phillippon, 2003). According to Skinner, (2000), managers have significant financial rewards for outperforming the standard. Consequently, companies that merely outperform their benchmarks may be engaging in earnings management. Losses, falling profits and falling short of analysts' projections are all indicators of failure (Degeorge, 1999). Further, Brown & Caylor, (2004). Observed that as of the mid-1990s, management's focus shifted from preventing losses and profitability decreases to meeting and exceeding analyst projections. It was also stated

that companies are more likely to see an increase in their stock price if they exceed analyst expectations than if they simply avoid losses or profit decreases. Companies that receive buy ratings from experts are more prone to engage in earnings management in order to meet or slightly exceed analysts' predictions as documented by Abarbanell and Lehavy (2003). Therefore, companies whose earnings was close near analyst predictions were likely motivated to rein in their earnings in order to outperform the market average. Numerous people in the financial sector believe that GAAP prevents managers from using discretion in financial reporting and the designing of operations that result in manipulated profitability (Healy & Wahlen, 1999). An essential function of financial statements is the timely and reliable dissemination of financial data to interested parties (Johnson & Solomons, (1984). Earnings data are indeed a crucial part of these annual reports since investors and others use them to assess the company's performance. It has been contended that management team have the capacity and the desire to alter reported earnings so as to boost or reduce present-day profits in comparison to their "uncontrolled" average. The question of whether management's manipulation of reported earnings crosses the line into fraud is at the heart of accountings study.

Boards are under pressure to diversify their memberships in an effort to boost their effectiveness in a rapidly evolving global economy. Carter et al. (2003) expanded on the findings of Robinson and Dechant (1997), who discovered multiple forms of support for variety. First, they reasoned that variety improves greater knowhow of the marketplace. Second, variety fosters creativity and innovation, as attitudes and opinions appear to differ with demographic characteristics. Third, variety fosters more effective issue resolution, as different opinions are taken into consideration when

coming up with the decision. Based on the findings of Carter et al. (2003), a divergent board is linked with a higher net worth as evidenced by Tobin's Q.

1.1.1 The Incentives for Earnings Management

Earnings management incentives have been well-documented in a variety of academic settings. Brunelle et al., (1996) connected it to the strategy of increasing shareholder value and maximizing CEO compensation by means of earnings management as well as income smoothing. Healy and Wahlen (1999) claim that the motivations for "window dressing financial reports" involve the need to boost manager remuneration and job security, the need to avoid breaching debt solemn as well as the need to either reduce administrative cost or raise administrative benefits. Leonard (2020) singled out income smoothing, the occasional luxurious soak and thriving in the know and maximizing variability as four distinct strategies.

The most current proposal for rewards to manage earnings was made in 2008 by chen et al. First, there is the drive for the capital markets, which includes going public, temporal equity issues, executive-driven plans as well as merger strategies to achieve and exceed earnings projections, smooth out income, etc. Second, contractual incentives like management pay, a debt settlement or job stability all help to motivate employees to manage their finances. Third, enticing statutes and regulations, including those governing imports, industries, competition, etc., can play a role. According to Cornet & de Keizer, (2008), managers use discretionary accruals as a motivation for options (the incentive for bonus income by achieving a certain level of performance) and stock price manipulation to boost managers' wealth through restricted stock pay. Other well-documented incentives for managers' opportunism in the literature include bonus plans, exceeding analyst expectations or obtaining funding on more advantageous terms (Shah, Zafar and Durrani, 2009).

In East Africa, earnings management is believed to be widespread. One international investigation found that the operating earnings of the Standard & Poor's 500 stocks were exaggerated by at least 10% annually owing to write-offs and other accounting techniques. However, no studies in East Africa have been conducted to investigate its scope, but the existence of troubled businesses suggests that it exists. Chen (2010), stated that earnings management is utilized to either mislead stakeholders about a firm's growth or to interfere contractual outcomes that focus primarily on reported accounting numbers (Watson (2002). Greuning (2006) listed earnings management manipulations such as aggressive accruals, overestimated estimates for bad debts, cost capitalizations, deferred discretionary expenses and many others. For the market to operate efficiently and effectively, availability of accurate information on the market is important for accurate decision making. Accurate financial reporting has been a nightmare to investors, brokers, dealers and other market dealers so as to maximize the returns on their investments.

1.2 Statement of the Problem

Earnings management is a harmful and ineffective conduct that arises in a complex environment involving analysts, investors and business managers (Mohamad-Zainal, 2019). Earnings management can be classified as black, white or gray (Ronen & Yaari, 2008). Earnings management is classified as black if it comprises outright fraud and deception, gray if it falls within the bounds of conformity with bright-line norms, while white if it serves an opportunist or efficiency-enhancing purpose (Ronen & Yaari, 2008). According to Hashim and Devi (2008b), earnings management can be advantageous if it conveys long-term value, harmful if it hides short- or long-term value, but neutral if it discloses the real short-term performance.

In 2012, Kenya was the 102nd out of 144 most competitive economy worldwide, while in 2011, it had fallen to the 106th position. Kenya's economy was ranked 110th out of 144 in 2015. Companies in Kenya fell because of unethical behaviors like fraud and corruption which impact on investor protection, casting doubt on auditing and reporting standards and minority shareholder rights (World Economic Forum, 2012). During the same time period, tension among company boards led to unfavorable press that has had a chilling effect on how investors view publicly traded businesses (Mugwe et al., 2012). Poor corporate governance and alleged corruption leading to mismanagement of investor capital helped set off the boardroom warfare, which begs the question of how well investors are safeguarded. CMC Motors and East Africa Portland Cement are just two of the NSE-listed firms that experienced boardroom conflicts in 2012 alone. In addition, many businesses have recently gone under with earnings management concerns, involving the fabrication of financial data as the stated cause. These businesses include Uchumi supermarkets limited, Nyaga stock brokers, cheap securities, Francis Thuo & partners, and Ngenye Kariuki stock brokers, imperial bank (Wamwea, 2010). Erroneous financial reports put users of this information at risk and can shake their trust. If rogue auditors are allowed to issue erroneous findings, the companies implicated could fail, as well as several billions of shillings in government spending (George, 2014). Some examples of corporate scandals that have been blamed on poor management and leadership including the 2004 collapse of Euro Bank, the 2004 receivership of Uchumi Supermarkets due to mismanagement, the near collapses of Unga Group and National Bank of Kenya, board room wrangling, and the discovery of secret overseas bank accounts used by some directors at CMC motors to embezzle company funds (Madiavale, 2011). The recent wave of business failures, according to Golay, Hendrikse & Lim, (2004). He

argues, is proof that many directors prioritize their own interests over those of the business and its stakeholders. Prior to 2002, major liquidity problems and the dissolution of public institutions in Kenya were attributed in part to inadequate management. Several worldwide studies on board diversity as well as earnings management have been conducted, notably Alshehriet al., (2012) who investigated earnings management methods and the impact of external audit and corporate governance in developing markets from Saudi-listed businesses, and Iraya, Mwangi & Wanjohi, (2014) who investigated if corporate governance affected earnings management in Latin American markets. While there have been a variety of local studies of corporate governance, nobody has specifically addressed the topic of earnings management.

Firms employ steps ranging from judgments within accounting rules to outright fraud to influence their financial outcomes. Choices taken inside accounting regulations are frequently considered as earnings management and legal procedures. Perols & Lougee, (2011) noted that crime has the same purpose as earnings management but vary in terms of earnings management in that fraud is beyond the generally accepted accounting standards, while earnings management is inside GAAP. A key question explored in the research was whether or not a more diverse board would have a positive effect on the way earnings were handled. How many more businesses are on the brink of failure, and how many more stakeholders will be wiped out, is an open question? The purpose of this research was to determine how board diversity affects operational expenditure and earnings management.

1.3 Objectives of the Study

1.3.1 General objective

The extensive objective of the study was to establish the impact of board diversity on earnings management in Kenya.

1.3.2 Specific objectives

1. To establish the experience diversity of board of directors' effect on earnings management.
2. To assess to which extent the age diversity of board of directors has on earnings management.
3. To establish the education diversity of the board of directors' effect on earnings management
4. To determine the Ethnic Diversity of the board of directors' impact on earnings management.
5. To determine the gender diversity of the board of directors' effect on earnings management.
6. To establish the moderating effect of board diligence on the relationship between experience diversity and earnings management
7. To establish the moderating effect of board diligence on the relationship between age diversity and earnings management
8. To establish the moderating effect of board diligence on the relationship between education diversity and earnings management
9. To establish the moderating effect of board diligence on the relationship between ethnic diversity and earnings management
10. To establish the moderating effect of board diligence on the relationship between gender diversity and earnings management.

1.4 Hypothesis

HO_1: There is no significant correlation between experience diversity of board of directors and earnings management.

HO_2: There is no significant relationship between the age diversity of board of directors and earnings management.

HO_3: There is no significant relationship between education diversity of the board of directors and earnings management.

HO_4: There is no significant relationship between Ethnic Diversity of the board of directors and earnings management.

HO_5: There is no significant relationship between gender diversity on the board of directors and earnings management.

HO_{6a}: Board diligence does not moderate the relationship between experience diversity and earnings management

HO_{6b}: Board diligence does not moderate the relationship between age diversity and earnings management

HO_{6c}: Board diligence does not moderate the relationship between education diversity and earnings management

HO_{6d}: Board diligence does not moderate the relationship between ethnic diversity and earnings management

HO_{6e}: Board diligence does not moderate the relationship between gender diversity and earnings management

1.5 Significance of the study

NSE plays an important part in fund sourcing for investments and developments. It enables the issuing firms an access to a wide variety of investors. For the market to operate efficiently and effectively, availability of accurate information on the market is important for accurate decision making. Accurate financial reporting has been a nightmare to investors, brokers, dealers and other market dealers so as to escalate

their investments returns. The current study quest for clarity on whether board diversity is key for effective financial reporting. There being no appropriate guidelines on diversity of boards, firms continue to handpick board members of their choice. The guidelines on board of directors concentrate mostly on the maximum number of board members which should be also an uneven number. The study will act as pinpoint to researchers and academicians as it will give a base for future researches on Earnings Management on firms listed on the NSE and other events.

1.6 Scope of the Study

This research was conducted on all firms listed at the NSE's from 2006-2015. It only included those that consistently traded within that period in the agriculture, business and services, telecommunications, technology, automotive, banking, insurance and investment, energy and petroleum sectors, manufacturing and allied between 2006 and 2015. The data collected was purely secondary.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section contains literature review covering earnings management and board diversity as research variables. Several theories have been used to examine earnings management and board diversity and related constructs but this research finds the agency theory as a useful theoretical perspective.

2.2 The Concept of Earnings Management

Exaggerated estimates for bad debts, delayed discretionary spending and cost capitalization are examples of manipulations that result in earnings management (Greuning, 2006). Previous studies have pinpointed various reasons why firms and institutions manage earnings as; income smoothing and equity offerings, (Yoon, 2002) and ownership control (Deangelo, 1988). In a study by Lang et al. (2003), it was discovered that organizations with little earnings smoothing have a stronger negative correlation between accruals and cash flows because accruals tend to flip over time and therefore are typically unfavorably connected with cash flows.

It's common practice to divide earnings management under two subfields: accruals management as well as real activities manipulation (RM). Based on the findings of Skinner, (2000), accruals management is conducted within the confines of Conventional accounting procedures that aim to obfuscate or conceal genuine economic performance. Notably, RM occur when managers adjust the schedule or design of an activity, acquisition or funding transaction to affect the accounting system. Schipper (1989) defines earnings management, which includes RM, as a deliberate intervention inside the external financial reporting process to generate

private benefit. So far, researchers have investigated numerous specific accruals to check for earnings management, such as bad debt expenditure (Teoh,Wang & Rao 1998), loan loss provisions (Beaver, Eager & Wolff,1989; Wahlen, 1994), and assert loss reserves (Petroni 1992; Beaver and McNichols 1998; Kim, Nelson & Nelson, 2000) Much of this writing explores cases exclusive to one field. Debt contracts, stock offerings, compensation agreements and insider trading are all ways to encourage earnings management to bring in more money. They are viewed as the causes of earnings overstatement.

Debt contracts are a significant topic of study in financial accounting because creditors often employ financial figures to restrict firms' operations, such as mandating that particular performance targets be attained or setting limits on permitted investing and financing activities. Debt covenants, it is argued, offer incentives for executives to enhance profitability, whether to lower the strictness of accounting-based limits in loan agreement or even to avert the penalty of covenant infringement.

Notwithstanding the conflicting outcomes of economic impact research, experts have lately started to look into the contribution of accounting choices in the incidence of true technical fault at businesses (Beneish and Press, 1993; Defond and Jiambalvo, 1994; Sweeney, 1994; and DeAngelo, and Skinner, 1994). Other study contradicts this conclusion (Beneish and Press, 1993; DeAngelo, and Skinner, 1994). The extent to which these actions will be adequate to delay default is likewise unknown. As a result, the results of these studies are inconclusive regarding whether or if managers make income-enhancing accounting changes to remain solvent. Analyzing a representative sample of private loan agreements and measuring companies' proximity to current ratio and tangible net worth constraints, (Dichev & Skinner, 2000) discover

that potentially a much bigger proportion of businesses are above the covenant breach threshold than below. Managers, it is implied, should act in a way that prevents them from breaking the covenant. Studies evaluating the bonus theory on pay agreement, (Healy, 1985; Gaver et al, 1995; and Holthausen, Larker and Sloan, 1995) have demonstrated that managers adjust reported earnings to maximize their remuneration. With exception of Healy (1985), these studies testify that manager's decrease stated wages to increases proportionally reward. Furthermore, Holthausen et al, (1995) discovers no proof that the management teams will boost revenue and imply that evidence of Healy (1985) is produced by his experimental design. On the contrary, equity offerings has exhibit considerable controversy with relation to earnings management. Researchers suggest that managers' motivations to boost reported revenue is done in the perspective of security promises.

Specifically, prior study has found information asymmetry between investors and owner-managers during the period of initial public offerings. Simulations such as Leland and Pyle (1977) imply that the amount of stock held by insiders reflects their private value, whereas scenarios such as Titman and Trueman (1986), Hughes (1986), and Datar et al, (1991) investigate the impact of the auditor's trustworthiness on the offering price. Selecting an independent regulatory agency or consenting to an agreement that punishes the insurer for dishonest disclosure are two methods by which this asymmetry might be addressed in such setups. Numerous models are applied in empirical research to evaluate managers' use of discretionary over accruals at the point of security offers, with the underlying assumption that knowledge asymmetry will persist. Several studies look into earnings management as a possible clarification for the strange behavior of stock prices after they have been issued. Teoh, Welch, and Rao (1998) and Teoh, Welch, and Wong (1998a) research earnings

management in the framework of IPOs, whereas Rangan (1998) including Teoh, Welch, and Wong1998b) who examine it in the setting of seasoned stock issues. The result indicated demonstrates that estimations of issue earnings management are strongly negatively linked with eventual earnings and return performance. These research' findings imply that market players aren't aware of the value-affecting effects of unforeseen accruals.

Insider trading is a trade-related incentive and a fairly recent addition to the list of possible antecedents to income-enhancing profits management in relation to capital-raising. Less prevalent, but perhaps more persuasive than the statistics on stock issuance as an incentive, is the idea that insider trading is an incentive to raise revenue in order to mislead investors. This is due, in part, to the premise that the data comes from companies that have actually engaged in fraudulent activity, such as manipulating their financial statements (Beneish, (1998a).

Beneish (1999b) reveals that companies with GAAP-violating profit inflation are more likely to liquidate their ownership and redeem stock appreciation rights during the time of inflated profits. Therefore, according to Beneish (1999), managers are operating as educated traders if they are expected to use their knowledge of profits overstatement to trade for their personal gain. In other words, if managers overestimate results to provide market participants with positive private information about the business's prospects, we expect them to either strategically increase their holdings in their firm's shares, perhaps to send another positive signal about firm prospects, or refrain from trading. Alternately, if managers manipulate profits to hide worsening business performance, they are inclined to sell their contingent wealth.

2.3 The Concept of Board Diversity

Many industrialized Western nations have a well-developed governance framework to influence the capital market that is consistent with their political, social, and economic contexts, whereas contextual governance frameworks are largely absent in emerging securities markets, including Kenya. Additionally, the principles outlined in governance frameworks and the codes of conduct of emerging nations are largely derived from recommendations made in developed countries, which have remained uncontested and untested for this different context (Haniffa and Hudaib 2006; Le and Walker 2008).

A large body of literature has already examined the relationship between the structural factors relating to the board of directors and earnings quality. The structural factors discussed in the literature mainly include the proportion of outside/independent/non-executive directors (e.g., Klein 2002; Park and Shin 2004; Dimitropoulos and Asteriou 2010) as well as other factors such as CEO duality (e.g., Xie et al. 2003; Rahman and Ali 2006) and director ownership (e.g., Anderson et al. 2003; Ahmed et al. 2006). These studies identify structural factors as necessary attributes for 'best practices' in governance, but most studies focus on specific factors such as the duality of the chairman being the CEO, the proportion of independent directors on the board, and the directors' ownership in the firm. In a real-life scenario, two or more of these factors may exist simultaneously, but thus far studies have largely ignored their combined effect for a given outcome.

Isolated factors in the structure of the board of directors have had various influences on different outcomes. For example, several studies have shown that a greater proportion of independent directors associates with firms making less discretionary accruals (Klein 2002; Xie et al. 2003; Dimitropoulos and Asteriou 2010), whereas

Park and Shin (2004) and Rahman and Ali (2006) find no statistically significant association between the two. Park and Shin (2004) show at least four possible reasons why independent directors generally fail to curb earnings management in Canada: (1) independent directors, as a whole, may lack financial sophistication and/or access to relevant information to detect and correct earnings management; (2) independent directors may not be interested in curbing earnings management because they lack ownership interest in the firm they monitor; (3) the presence of dominant shareholders in many firms may make it difficult for independent directors to effectively curb earnings management; and (4) the labour market for independent directors may not be well developed in Canada. Rahman and Ali (2006), examining firms in Malaysia, also show that independent directors are ineffective at discharging their monitoring duties. They assign this ineffectiveness to a lack of expertise, and a lack of the skills and knowledge needed in the business environment.

Previous studies report mixed results on the relationship between board member expertise and earnings management. There is an inverse association between board financial expertise and earnings management, (Alzoubi & Selamat, 2012; Siam, Laili, & Khairi, 2014). As it mitigates earnings management practices in listed firms. Similarly, Liu and Tsai (2015) reveal the effect of board member characteristics on earnings management activities. The result documents that there is a significant negative relation between board member expertise and real earnings management. Hence, the board member expertise constrains real earnings management. Conversely, Ahmed (2013) examines the effect of the board of directors' characteristics and earnings management. The result reveals that there is a positive relationship between board member expertise and earnings management.

The Board of Directors' gender diversity measure by the percentage of females in the Board to the Board's total size. Gender diversity is having the presence of females on the Board. It's generally known that female members on the Board are more independent than male board members (Hosam Alden Riyadh Al Azeez, 2019). Women are generally perceived to be associated with less fraudulent practices. The inclusion of women on corporate boards may likely reduce the opportunistic tendency of appointed managers and enhance accounting quality. In corporate management, women are found to be more risk averse as they are less likely to take risks and act unethically in a bid to gain private benefits (Gul, Fung & Jang, 2009). The inclusion of women on the board may therefore serve as a control mechanism towards reducing earnings management from occurring and improving the quality of financial statements and enhancement of sustainable development of corporate entities.

However, these conclusions have been based on the analysis of specific governance attributes, and studies have sparsely examined the combined effect of governance attributes on various observed phenomena.

2.4 Theoretical Framework

The current study relies on agency theory, social identity theory as well as the upper echelon theory. In order to keep an eye on management, boards engage in tasks including evaluating the chief executive officer (CEO), checking in on how well the company is following its strategic plan, and deciding how much the CEO should be paid, among many others (Johnson et al., 1996; Hillman and Dalziel, 2003).

2.4.1 The Agency Theory

This theory argued that a business enterprise is a contractual web in which principals or the owners of economic resources, entrust their management to serve as their agents in the utilization and control of those assets (Jensen and Meckling, 2019).

According to the notion, principals are unable to ensure that their interests are being taken into account by agents since the agents have greater information at their disposal. So, the theory characterizes enterprises as frameworks vital to the upkeep of contracts, and through firms, authority can be exerted to curb agents' propensity for exploitative action (Jensen and Meckling, 2019). To balance the agent's and principal's interests, a comprehensive contract is drafted to satisfy both parties' concerns. When a principal uses an expert and systems (auditors and control systems) to keep tabs on their agent, it strengthens the agent-principal connection. The theory also acknowledges that any gaps in knowledge regarding the agent's connections, interests, or work performance can be harmful and constitute a moral hazard. Moral hazard as well as adverse selection influence the production of the agent in two ways; preventing the agent from obtaining the necessary knowledge and also by preventing the agent from carrying out the duties to the letter. Thus, the agency theory is founded on the premise both principals and agents are rational actors who utilize contracts to enhance their worth (Jensen and Meckling, 2019). This idea applies to this work as stakeholders have faith in the board of directors run the organization on their behalf.

2.4.2 Social identity theory

The social identity hypothesis claims that having a board that is evenly split between the sexes is bad for business. According to his reasoning, a more cohesive board benefits from a more similar collection of directors because such boards have less interpersonal friction and are therefore easier to communicate within. In contrast, with regard to the resource-based perspective of the organization, they anticipate that a gender-balanced board will result in greater business performance. This perspective expands on the thought that bringing in new perspectives and skill sets can only

improve the management process. Based on their findings, the authors conclude that companies having a greater representation of women on their boards of directors tend to use more economical Earnings Management Strategies, which means that their income is likely to be lower overall. (Sami, 2010).

2.4.3 Upper Echelon Theory

According to this hypothesis, a company's success or failure can be predicted by looking at the demographic features of its top management team (TMT). Top executives' cognitive biases, values, and attitudes not only limit their field of vision and selective perception, but also filter information via the prism of cognition, and so will impact their decision-making processes (Hambrick and Mason 1984). The effect of TMT demographic features on business performance can be estimated using demographic variables like as age, tenure, education, and functional track as stand-ins for the quality of cognitive bias, values, and attitudes.

Specifically, the two aspects of the upper echelons' theory proposed by Hambrick and Mason (1984) and expanded upon by Knight et al. (1999) are (1) the idea that executives take action based on their unique readings of the strategic position they find themselves in, and (2) the idea that these unique interpretations are a product of the executives' own unique experiences, values, and personalities. In addition, according to Hambrick et al. (2005), executives' biases are translated into actions through an information filtering mechanism. In other words, executives' experiences, values, and personalities influence their field of vision, or where they direct their gaze and ears, their selective perception, or what they focus on, and their interpretation, or how they give meaning to what they observe.

2.5 Empirical Review

2.5.1 Board Diversity and Earnings Management

In a way of ensuring that the interests of many stakeholders are taken into consideration in corporate governance, it is essential that boards become more diverse (Kang et al., 2007; Luoma & Goodstein, 1999). It has been shown that a more diverse board can make better strategic decisions on social matters. Top management teams (TMTs) with a wide range of members' academic, professional, and operational backgrounds generally come up with better alternatives overall, as per studies that have objectively explored such phenomena (Bantel, 1994; Wiersema and Bantel, 1992; Bantel and Jackson, 1989).

Corporate governance scholars have similarly that a more diverse set of board members can lead to a more robust discussion of differing view proposed point's ultimately more viable options for making strategic decisions (Kosnik, 1990). As earlier indicated, boards with a wide range of demographic representation typically have members with unique skill sets and perspectives as opposed to the more typical academic and professional backgrounds. Therefore, the degree of board demographic diversity could embody or mirror the board's cognitive abilities and collaborative issue capabilities.

Since stakeholder's relationships constitute the foundation of CSP (Mitchell et al., 1997) it seems logical that enhanced connections with a variety of stakeholders will lead to an improvement in CSP. Similarly, previous studies have shown that demographic diversity on boards is linked with increased corporate philanthropy and community engagement (Coffey and Wang, 1998; Stanwick & Stanwick, 1998; Wang & Coffey, 1992). Public perception is boosted when consumers see that a company

shares their values by having a board that reflects the demographics of its clientele (Bilimoria, 2000). In addition, boards that reflect the variety of their employee bases send a message about the company's culture and beliefs (Albinger & Freeman, 2000; Turban and Greening, 1996). Therefore, it is anticipated that boards with a wide range of backgrounds will get along well with CSP (Miller & Triana, 2009).

Based on the work of Robinson & Dechant (1997), who discovered multiple sources of diversity support, Carter et al. To begin with, they reasoned that a more diverse group would have a more complete picture of the market. Second, because people of different backgrounds have different perspectives and values, a diverse group of people is more likely to generate new ideas and solutions to problems. Finally, a diverse group is better able to solve problems since all perspectives are taken into account. According to Carter et al. (2003), diverse boards increase a company's worth as measured by Tobin's Q.

2.5.2 Experience Diversity and Earnings Management

When it comes to impacting a company's ability to effectively manage its profits, human capital is the single most important form of intellectual capital. According to Rahman (2012), human capital efficiency is connected to enhanced financial success. When it comes to boosting corporate output, Roos et al. (2001) highlighted the importance of professionalism, efficiency, and effectiveness. Having board members with a wide range of experiences is crucial as businesses become more complicated and competitive. This may have a practical purpose or be sector-specific.

Functional refers to the main tasks performed by a corporation, such as finance, accounting, marketing, operations, or human resources. When a board member has extensive experience in a particular business, such as steel, medicines, airlines, etc.,

they are said to be "industry specific." Directors with specialized knowledge could potentially make important contributions to a given field. Examples are doctors in health care, actuaries in insurance, and marine architects in shipping.

In addition to academic knowledge and professional, it is widely considered that experience may have a significant effect in an individual's performance (Kotur, and Anbazhagan, 2014). An employee with years of experience will likely have little trouble keeping their income under control because of the unique skill they have developed through their employment. How long directors have been in office is a good proxy for how knowledgeable they are. Experience can be categorized into several areas which include general management, law, finance and accounting, civil service, public service and academic consulting. The ability of the board member to contribute may be enhanced by if they have a prior a broader base of experience (Finkelstein, 1992). Boards with experience diversity are linked with a positive impact on performance hence low chances of earnings management (Jhunjhunwala, 2012). Another study found out that a director with a functional background in finance may have experience in marketing hence functional experience may not contribute to earnings management. (HZhu, Shen, & Hilman, 2014).

2.5.3 Age Diversity and Earnings Management

Research indicates that age is an important variable which influences behavior, beliefs, values and attitudes, as well as strategic orientation (Child, 1972; Taylor, 1975). Wiersema and Bantel (1992) associate older decision makers with concerns about financial security and thus risk-taking is considered as a threat to personal security. On the other hand, younger decision makers are associated with greater mental energy and stamina, novelty, risk-seeking behavior and the promotion of strategic change (Hamrick and Mason, 1984; Wiersema and Bantel, 1992). Child

(1972) argues that young decision-makers devote more mental and physical energy supporting strategic change and the development of the organization. He claims that the reason for this is that younger decision-makers are more likely to have been educated recently, and will therefore be more familiar with decision-making and its relation to firm performance (Bantel and Jackson, 1992).

Although studies have focused mainly on young and old executives, it is likely that a board of directors composed of both young and old members is the most likely to facilitate the proper monitoring of executives and to provide meaningful strategic guidance, which may help in enhancing firm performance. Age diversity promotes a range of opinions on strategic problems, since elder board members contribute experience and knowledge, whilst younger board members bring enthusiasm, drive, and fresh information. In other words, older directors contribute more stability and experience to the deliberation process, while younger directors bring greater enthusiasm and ambition to new endeavors (Tarus, 2014).

Along with stakeholder theory, age diversity ensures that various sorts of stakeholders are considered. For instance, businesses in the consumer sector may target customers in several age groups, as well as the best approach to address each age group's demands is to have directors who reflect a variety of age groups and viewpoints (Kang et al., 2007; Huse and Rindova, 2001). Moreover, age is a significant source of power specifically in Africa; hence, the opinions of younger individuals may be seen as subservient, despite the fact that they prefer to be more educated and skilled (Blunt, 1980; Dia, 1991).

2.5.4 Level of Education Diversity and Earnings Management

According to the general consensus, educated individuals can execute particular obligations more simply and effectively than people with less education or none whatsoever. This is consistent with the adage "knowledge is power." According to Kotur and Anbazhagan, (2014), lack of education and expertise renders a person ineffectual and ineffective, hence reducing the likelihood of getting a management position. In this regard, the level of education is an average of the levels of academic or professional attainment the directors have attained. Different organizations are engaged in different activities like hospitals engaging in health matters while in financial institutions engage in accounting issues. The level of education may help the board members understand well how to manage such an institution.

In the current constitution the issue of education level is addressed by setting the minimum qualifications for one to hold a certain public office including elective office unlike in the past where the condition was based on popularity. The members' educational background may reveal expertise relevant to sound decision that might influence their ability to participate in possibly conflicting ways to board nomination (Kosnik, 1987). Board members who possess the necessary expertise are more inclined to get involved in strategy, according to Tarus and Tuwey (2015), since decision-making necessitates a depth of expertise and knowledge.

2.5.5 Ethnic Diversity and earnings management

Public governing boards include approximately twice as many minority members and chairs compared to independent boards. According to the Association of governing boards of universities and colleges magazine, members of nationality and racial minority groups comprise 23,1% of members and 17.1% of chairmen of public

governing boards, as well as 12,5% of members and 7% of chairs of independent college and university boards. Over the last four decades, there has been a rise in racial and ethnic diversity among board members in both the public and private sectors, but the pace of change has slowed in recent years, as it has for women.

Organizational longevity, legitimacy, and the link between revenue management and participation in society are all threatened by this trend, which is especially pressing as the demographic make-up of many countries continues to shift. When individuals experience a sense of belonging, they are more inclined to remain loyal to that group. Rather than ethics, cultural factors play a larger role in shaping people's actions (Nambudiri & Saiyadain, 1978).

According to Aosa, (1992), modern African organizations are often fraught with tension due to people's strong ties to their families and communities of origin. In East Africa, Blunt backed this (1978). According to Dia (1991), racial tensions within a company might reduce productivity. Africans who have had a western education may be familiar with western principles of management in the workplace, but they are often affected by their cultural norms instead. The mix of cultures may end up bringing tension in individuals who are aware. (Blunt, 1978, Dia, 1991).

Some residents are born and raised in the area. They hardly encounter Western culture. Disputes between employees of various cultural backgrounds are a common source of friction in modern workplaces (Aosa, 1996). Maathai (2009) claims that colonialism de- cultured Africans, making them anxious and preoccupied with worldly possessions and ostentatious displays of wealth. Years of colonization and the imposition of foreign culture with the aim of subjugating Africans, she claims, have

resulted in a loss of self-identity and character, which in turn contributes to corruption.

2.5.6 Gender Diversity and Earnings Management

Gender diversity is the most debated diversity issue, not only as regards the boardroom, but also in the more general context of leadership. For example, in recent years, there has been a concerted effort by governments all over the world to legislate for gender diversity in positions of governance (Tarus, 2014). The CMA's corporate governance standards encourage boards to be "gender aware" in their director appointments; in the East African context, this means appointing more women to the board. According to study by Campel and Minguez (2008), the presence of women on corporate boards is associated with better financial outcomes. This association was not seen in other research. Watson (2002), Rose (2007), Emilia and Sami (2010) found no association between profits management and the gender of a company's chief executive officer in Finland. Rambo (2010) found that the proportion of women on the boards of listed and unlisted commercial banks in Kenya had the stronger positive effect on financial performance. Female directors had better attendance records than male directors, and women are more likely to join monitoring committees, according to study by Adams and Ferreira (2008), suggesting that boards with a larger representation of women dedicate more resources to monitoring.

In a survey of 540 corporations with reissued financial statements in the United States, Abbot & Crona and Parker, (2012) discovered that the inclusion of women on company boards encourages more precise financial reporting. Researchers discovered that businesses with at least one woman on the board issued fewer restatements. They theorized that female board members would be more vigilant in their monitoring of

financial statements because women have a tendency to be more risk-averse and conservative in their investment decisions.

Some researchers have just lately begun to determine the impact of a diverse board, particularly one that includes women, on a company's bottom line. According to Campbell and Minguez-Vera (2008), empirical evidence is inconclusive and predominantly based on US data. In their sample of 200 top US companies, Shrader et al. (1997) found no correlation between the proportion of female board members as well as various accounting metrics of financial performance. Erhardt et al. (2003) observed that board diversity, as defined by the percentage of women and minorities including African, Hispanic, Asian, and Native American board members for 112 large U.S. companies, was positively linked with return on assets (ROA) and return on investment. Tobin's Q was highly associated with the percentage of women and minorities (African-Americans, Asian-Americans, and Hispanics) serving on the boards of directors of 638 of the Fortune 1000 companies in 1997, according to research by Carter et al. Female board member announcements at 309 Fortune 500 companies during the decade of the 1990s were met with no market response, according to research by Farrell and Hersch (2005).

There is a negative correlation between the percentage of women on a board and the company's performance, suggesting that boards with more women tend to be more successful overall. They reasoned that the rising number of women appointed to corporate boards in the United States was motivated less by performance and more by internal or external appeals for greater diversity.

Since 2005, the Norwegian government has mandated that boards include at least 40% female representation since it views diversity as an end in itself (Oslo, 2007).

Spain got on board by enacting legislation, while the Netherlands and Germany took a similar approach, commencing with voluntary charters devoted to gender equality in corporate boards (Jarnicki et al., 2008). Similar outcomes have been observed in developing countries: for example, the representation of women on corporate boards in Kenya accounts for only 8% of their total constitution (Tarus, 2014). The same spirit is portrayed in the Kenyan constitution where one third of public offices are encouraged to be filled by women and the people with disabilities. It has also been noted in the tenders where all public institutions are required to set aside a certain percentage of tenders for women and people with disabilities. New positions in parliament have been created for women representatives in the county.

The claim that gender diversity has a positive role in performance of the firm may be supported from different theoretical perspectives. The first of these is agency theory, which relates to the independence of directors and the ability to monitor management. Research shows that gender diversity provides a board with the wherewithal to monitor management (Carter *et al.,* 2003; Terjesen *et al.;* 2009). The stakeholder theory argues for the representation of both genders in the firm for the purposes of equity and fairness (Keasey *et al.,* 1997), as an indicator of the firm's commitment to gender balance so as to enhance quality decision.

The resource dependency theory postulates that an effective board should provide access to linkages and networks. A growing body of academic research suggests that boards benefit from a more diverse membership because it allows them to draw from a wider range of expertise (Daily et al., 1999; Singh and Vinicombe, 2004). Letendre (2004) argues that having women on boards is beneficial since it increases debate and opens up new perspectives. Women tend to be younger than men on boards, and Bilimoria and Wheeler (2000) argue that this brings fresh perspectives and innovative

problem-solving to the table. In a research of a sample of 1000 publicly traded firms, according to research by Hillman et al. (2007), the percentage of women on a firm's board is strongly correlated with the number of other women in senior leadership positions inside the company.

2.5.7 Moderating role of Board Diligence on the relationship between Board diversity and Earnings Management

Concentration of board action is also a relevant board attribute that can be indicated by the number of meetings held by the board (Vafeas, 1999). Board diligence here denotes to the frequency or the number of the meetings held by the council in a calendar year. However, there are mixed theoretical and empirical opinions on the effect of boards meeting on earnings management.

Gosh (2007) found that for every 10% increase in the quality of council sessions, productivity increased by 1%. Regular board meetings improve the likelihood of directors carrying out their responsibilities to advance shareholders' interests, as proposed by Lipton and Lorsch (1992). Regular council meetings have been linked to higher quality audit results (Carcello, et al., 2002).

Researchers in Malaysia found a different link between board diligence and corporate performance. Carcello et al. (2002) agree, stating that the frequency of board meetings should encompass more than just board meetings, such as preparation and follow-up. In conclusion, it may be argued that board vigilance has a significant impact on earnings management. The current study, therefore, explores board diversity that has not been addressed by local studies, using board diligence as a moderating factor to study the connection in Kenya, using listed firms on the NSE as a case study.

2.6 Review of the Control Variables

2.6.1 Firm Size

Scholars from strategic management, accounting, finance and economics have attempted to study the reasons among variations of performance among firms (Ibhagui, Olokoyo, 2018). Size of a firm has been studied by different scholars, in their studies size has been demonstrated by the number of employees, the total assets held by the firm and also by the levels of sales among many indicators of size (Becker *et al* 2010). The size of a firm affects financial performance of a firm. Studies have pointed out that large firms enjoy economies of scale unlike small firms (Chodorow-Reich *et al,* 2021). More so studies show that large firms can capitalize on opportunities that small firms may fail to finance (Abbasi, & Malik 2015).

A study by Chen, Huang and Yang, (2013) examined the relations between audit quality, audit firm size, and financial performance. This study evaluates audit quality of firms from human capital-related factors, such as educational qualification level of employees, experience of employees, and professional training. From a sample of 9192 firms both primary and secondary were collected and findings indicate that firms' size has a positive relationship with financial performance of firms.

Abbasi & Malik (2015) did a study on Firms' size moderating financial performance in growing firms in Pakistan. In this study size of the firm was measured in form of market capitalization and with a sample of 50 firms, the study collected cross-sectional data and used descriptive and inferential statistics to find that size of a firm has a positive but weak effect on financial performance of listed firms in Pakistan. The study therefore recommended that management of firms should keep an eye on the size of the firm.

2.6.2 Leverage

2.6.2.1 Firm Growth

Firm growth is one of the central engagements in the current literature. Business owners, managers and investors project financial performance by the growth sequence of a firm (Bottazzi, *et al* 2011). Growth measurement dimension takes the form of improved sales, profitability, assets, number of employees or take the other dimension of improved services which leads to quality or better processes Gupta, (2019). Studies by Neneh and Van, (2017) have highlighted that sales assets and number of employees are indicators of growth of a firm.

Literature proofs that growth affects financial performance of a firm. Firms that have used sales to measure growth have indicated positive relationship between sales and financial performance (Neneh, & Van 2017). Firms with increased assets indicate that they are utilizing assets to generate maximum revenues thus high ROA.

Batchimeg (2017) did a study on determinants of financial performance on 100 firms listed in the Mongolian stock exchange. Financial performance was measured using ROA, ROE and ROS while cost to revenue ratio, short term debt to total assets, quick ratio, cash ratio earnings per share growth in profit and growth in assets we used as the independent variables of the study. Panel data for the period 2012-2015 was collected and results from the regression indicate that growth in assets is insignificant to financial performance of firms in Mongolia.

Pantea, Gligor, & Anis, (2014) did a study on Economic determinants of financial performance on firms listed in Bucharest stock exchange. The study used firm size growth, capital intensity, human resource and corporate social responsibility as determinants of financial performance. Data for the 55 firms were collected from a

period of (199-2012) and results indicate that firm's growth has no linkage to financial performance.

2.7 Conceptual framework

The conceptual framework shows the predicted and predictor variables. The outcome variable is earnings management while explanatory variables that is board features include; experience diversity, age diversity, educational diversity, ethnic and gender diversity. To moderate the model, we have board diligence.

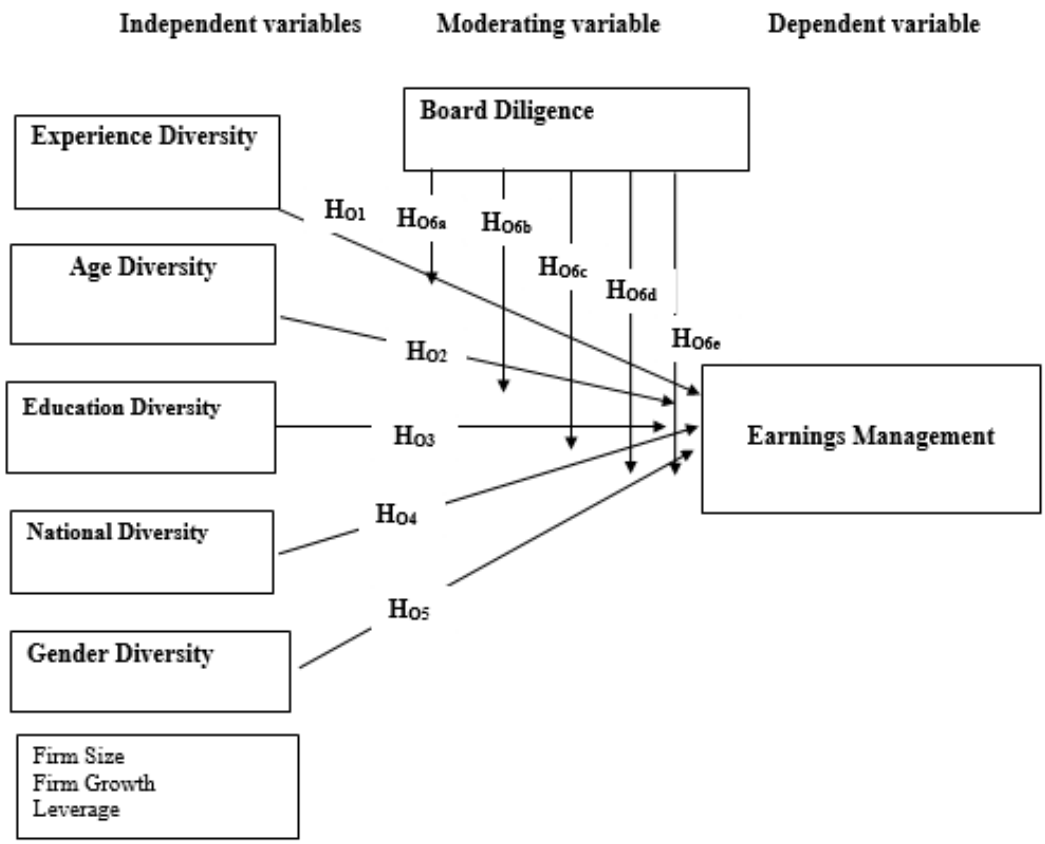


Figure 2. 1: Conceptual Framework

Source: Researcher (2018)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section entails research design, target population, data collection and data collection instruments, description and measurement of variables, model formulation and specification, estimation technique and diagnostic test and finally ethnical consideration.

3.2 Research Design

A research design, as defined by Cooper and Schindler (2008), is a summary of the study's important aspects that serves as a road map for data collecting, statistical analysis, and interpretation. It is more of a logical than practical issue, as it concerns the organization of an investigation. A research design's purpose is to guarantee that the data collected provides a clear answer to the study's posed issue.

This study utilized both explanatory and longitudinal research designs to characterize the study's data and explain its variables, respectively. Exploratory research design was also used for this study. Fourer, Gay & Kernighan, (1990) explained that exploratory research designs entail information-seeking, as in an attempt to confirm hypothesis or rectify problems with the current condition of the topic under investigation. Components of research design include sample procedures, research strategies, instruments, and methods for gathering evidence, analyzing data, and reporting conclusions. This research design is deemed appropriate because it collects numerical data on the same variable over an extended period. These designs were optimal for this study because it considers panel data for the ten-year period from 2006-2015. This is to test whether board diversity can affect earnings management. It

is convenient and economical for such a study. According to Babbie & Benaquisto, (2001) exploratory research clarifies the link between variables and their causes. According to Kothari, an exploratory study is "an inductive examination that analyzes a current occurrence inside its practical situation where boundaries among event and context are not instantaneously clear or when multiple sources of evidence are explored" (2007).

3.3 Target population

A population relates to the entire number of components from which we intend to draw conclusions (Donald 1990). In this regard, of the study considered all firms listed in the NSE between 2006-2015. Currently there were 66 firms listed as of 2015, firms listed in the Nairobi stock exchange. The reason for choosing them was that secondary data was readily available at NSE and they are relatively few and therefore convenient. The study population comprised active firms at NSE in the period 2006-2015. About 48 firms had complete data.

The study's inclusion-exclusion criteria focused exclusively on firms that operated continuously from 2006 to 2015. Firms that had been placed under receivership or under statutory management during the study period were excluded and these firms include National Bank of Kenya, Mumias Sugar and Athi River Mining. The study managed to collect data from 48 firms of the 66 firms which are clustered into 11 sectors. This number represented 73 per cent of the total number of listed firms. Which represented 480 firm- year observations data.

3.4 Data Collection and data collection instrument

Secondary data was collected from NSE handbooks and CMA library for the listed firms' financial statements for ten years between 2006 and 2015. An average of ten years minimized influence of current one-year observations which could occur

through the use of a single year data (Mugambi, 2011). Similar studies have used between five- and seven-year averages (Montogomery, 1979; Desarbo, *et al.*2005; & Rumelt, 1974). A designed documentary analysis guide was employed to collect data in a structured (Ayabei, way 2013). Use this manual to learn all there is to know about boards' gender, boards' experience, boards' age, boards' education and boards' ethnicity.

3.5 Measurement of Dependent and Independent variables

The study has one predicted variable which is earnings management whereas the predictor variables comprise of experience diversity, age diversity, education diversity, ethnic diversity and gender diversity. In agreement with the previous researches such as (Dechow, Sloan and Sweeney 1995 and Jaggi and Leung, 2007), a cross sectional regression of the modified Jones Model (1991) was used to obtain the discretionary component of accruals. The modified Jones model (1991) was selected because Dechow et al. (1995) indicated it to be the most effective model currently available for detecting earnings management. A company's total accruals (TACC) equal the sum of its net income (NI) less its cash flow from operating activities (CFOA). NI represents pre-tax profits and excluding unusual items (OCF). TACC is arrived at by subtracting NI from OCF.

Research variables should be quantifiable to enable hypotheses testing, making inferences and reaching conclusions. Measurement entails the operationalization of research variables. Sekaran & Bougie (2016) characterize the operationalization of concepts as "operationally defining a concept to render it measurable is done by looking at the financial performance facets, or properties denoted by the concept. These are then translated into observable and measurable elements so as to develop a measurement proxy of the concept". Operationalization thus entails reducing research

variables into their respective empirical measurements. The study operation operationalized the variables as follows.

3.5.1 Dependent variable

Earnings Management

Earnings Management is calculated as the Total accruals (TACC) which is the difference between net income (NI), which is the earnings before taxation and extraordinary item and cash flow from operating activities (OCF): TACC = NI - OCF.

According to Walker (2013) the level of discretionary accruals is the most common method used to detect earnings management. Among the different models for calculating the level of discretionary accruals, this study employs the modified Jones model developed by Dechow et al. (1995) as a proxy for measuring earnings management, which is the most frequently used to calculate accruals (Arioglu, 2020; Arun et al., 2015; Belaounia et al., 2020). The modified Jones' model consists of regressing total accruals (TACC) on three variables: the change in revenues (ΔRev), the change in receivables (ΔRec) and the level of gross property, plant and equipment (PPE). All variables and the intercept are divided by lagged total assets in order to avoid problems of heteroskedasticity.

$$TACC = (\Delta CASTit - \Delta Cashit) - (\Delta CLBit - \Delta SHTDit) – Depit \ldots\ldots 1$$

Where, for firm i and year t, TACC represents total accruals; TAst stands for the value of total assets; ΔREV is the change in net revenue of the firm i; ΔRec denotes the change in net accounts receivable; PPE is gross property, plant, and equipment; and ROA is the rate of return on assets. All terms were scaled by dividing with lagged total assets (TAsti,t-1). Total accruals (TACC) are separated into two components - (1) nondiscretionary accruals (NDACR) , which equal the fitted value of total accruals

obtained from estimating Eq. (1), and (2) discretionary accruals (denoted by DACR hereafter), which equal the residuals (i.e., μi,t) from estimating Eq. (3). The DACR reflects the unexplained part of TACC. Since corporate executives may either adjust earnings up or down, |DACR| i.e. the absolute value of discretionary accruals is used to measure the degree of accrual-based earnings management (AEM) (Hribar and Nichols, 2007). Last, the equation is estimated by year–industry, using two-digit Standard Industrial Classification (SIC) codes and at least ten observations (Klein ,2002).

The terms used in the above equation are described as following, TACC = Total accruals ΔCAST = Change in current assets for firm “i" and year “t” ΔCas = Change in Cash for firm “i" and year “t” ΔCLB = Change in current liabilities for firm “i" and year “t” ΔSHTB = Change in short term debt for firm “i" and year “t” Dep = Depreciation and amortization for firm “i" and year “t” Total accrual calculated through above equation were further used to find the non-discretionary accrual. Non-discretionary accruals are the residuals of the model presented in equation 2 which represents the Kothari et al. (2005) model to calculate the non-discretionary accrual using year and industry effects of the sampled data.

Where: DACC= Discretionary Accruals
TAC= Total Accruals
TA= Total Assets
ΔREV= Change in Revenue
ΔREC= Change in Receivable
PPE= Property Plant and Equipment
NI= Net Income
OCF= Operating Cash Flow
μ= Error Term i= Firm t= Time

3.5.2 Independent variables

Experience diversity is a continuous variable where the number of directors with experience since their first appointment. Prior studies find that the professional experience of executives influences their overall decision-making. Professional experience is skill and knowledge acquired through work experience.

Age Diversity is a continuous variable, age of board members was measured as the number of years since birth. Age diversity is another relations-oriented diversity on corporate boards. For many years, it is commonly known that corporate boards consist of middle to retirement aged directors and the majority are ex-managers of another companies within the same industry (Gilpatrick, 2000). Recently, the board director's age perception has been changed. The majority now prefer to have age diversity on corporate boards in order to represent different firm's stakeholders (Kang et al., 2007). Besides, the board can benefit from older directors group by sharing their experience and economic resources, while the middle aged group undertake the main responsibilities, and the younger director's group can use their energy to drive the firm and succeed. The current study adopt previous measure of age diversity as natural logarithm of average age of directors.

Educational Diversity is a continuous variable measuring the number of directors whose educational level is above undergraduate. The directors' educational profile is considered a crucial asset for public companies. Diversity of educational background is the diversity of educational backgrounds in the composition of the board of directors. Education also shapes a person's way of thinking in analyzing something. In a company consisting of people with various educational backgrounds, this can bring positive things to the company because the board of directors with different educational backgrounds will have different thoughts or opinions, which, when put

together, will emerge a new idea or innovation. The impact is expected to be positive for the company. In line with the research conducted by (Hoang, et al,2015) and (Sun, et al ,2019), the educational background of the board of directors has a positive influence on earnings quality.

Gender Diversity is a continuous variable that measures the number of females in the board. Prior research suggests board gender diversity to be measured as a proportion of total board members to get a proportional understanding of the inclusion of females on the board. The gender diversity is measured simply by the percentage of women on the board out of the total number of directors, beside the CEO (i.e. the ratio of women directors to total board size).

Ethnic Diversity is a continuous variable that measures the ethnic combinations in a board.

3.5.3 Moderating Variable

Board Diligence is a continuous variable measured as the number of meetings conducted in a year by the board of directors. Moreover, board meeting indicates the frequency of meetings the boards holds (Xie et al, 2003). The board meetings were measured by addressing the quality of yearly board meetings held by the board each year (Obigbemi et al ,2016).

3.5.4 Control Variable

Following previous studies, we include several control variables that may influence managers' accounting choices. Accordingly, this research measured firm size as the logarithms of total assets. Also, prior studies argued that the level of firms'

investment in fixed assets (tangibility) might likewise determine their borrowing decisions.

Ji et al. (2015) categorized firm growth as one of the control variables in terms of earnings management and cited as an important determinant. It is pertinent to note that there is mixed evidence on the effect of these control variables on earnings management practices. On the other hand, other research shows the positive association of firm size and earnings management (Wang, 2014; Saleh & Ahmed, 2005) leverage (Leverage) calculated as the ratio between the book value of all liabilities and the total assets of the firm and firm size (Size) measured as the natural logarithm of market value of equity (Arun et al., 2015; Jiang et al., 2010). Lai and Tam (2017) stated that highly leveraged organization has a strong incentive to manipulate earnings to alleviate the debt clauses in their debt agreements.

3.6 Operationalization of variables

Variables	Symbols	Measurement	Authors
DEPENDENT VARIABLE			
Earnings Management	EM	ADACR	Discretionary accruals calculated using Kothari et al. (2005) model
INDEPENDENT VARIABLES			
Experience Diversity	ED	Number of directors who have been in the Board for more than 10 years	Qi, Lin, Tian, and Lewis (2018), Siam et al., 2014
Age Diversity	AD	In logarithm of average age of directors	Ali, Ng and Kulik (2014)
Educational Diversity	ED	Average number of education qualifications earned by all directors	Xu, Zhang, and Chen (2018)
Gender Diversity	GD	Ration of female directors to the total number of the board	Carter et al. (2010); Li and Chen (2018)
Ethnic Diversity	ND	Proportion of all directors from different countries	Miller and Triana, (2009); Frijns et al. (2016)
MODERATOR			
Board Diligence	BD	Percentage of board meetings attended by a director him/herself in a year.	Gulzar (2011), Abdullahi & Yunusa, (2016), Mohammad (2017)
CONTROL VARIABLES			
Firm Size	FS	log of the firm's total assets	Abor,2005; Adekunle & Sunday ,2010
Leverage	lev	calculated as the ratio between the book value of all liabilities and the total assets	Li and Chen (2018); Lutz et al. (2020)
Firm Growth	(GTH)	Sales growth of firm i form the period t−1 to t.	Ji et al. (2015

Source; Researcher, (2023)

3.6.1 Hierarchical multiple regression

Hierarchical multiple regression is used to assess the effects of moderating variable. To test moderation, will use the interaction effect between independent variable and moderator whether or not such an effect is significant on the dependent variable.

A moderation effect could be; enhancing, where increasing the moderator would increase the effect of the predictor (independent variable) on the outcome (dependent variable), buffering where increasing the moderator would decrease the effect of the predictor on the outcome; or antagonistic, where increasing the moderator would reverse the effect of the predictor on the outcome. Necessary condition for moderation is proof of the relationship between independent variable and dependent variable.

In testing hypotheses, the study will use multiple regression analysis. The following regression model will be used.

3.7 Model Formulation and Specification

The study used panel data to estimate a functional model where earnings management was treated as the response variable while the predictor variables of interest were experience diversity, age diversity, education diversity, ethnic diversity and gender diversity. Regression analysis refers to the approaches used in modeling and analyzing numerical data consisting of response variable and predictor variable values (Hair *et al*, 2006). The functional relationship of the empirical model without the moderating variable appeared as follows:

3.7.1 Direct Effect Model

The simple direct effect model takes the form of $Y = \beta_{0i} + \beta_i X_i + \varepsilon$, where, β_{0i} is the overall effect of the independent variable on Y; β_{0i}, is the intercept for the linear equation and ε is the corresponding error term in the equation.

First, the control variables (Firm size, Firm Growth and Firm leverage) were regressed against earnings management for potential direct effects.

Second, the independent variables (Experience Diversity, Age Diversity, Education Diversity, Ethnic Diversity and Gender Diversity) were regressed against earnings management.

$EM_{it} = \beta_{0it} + \beta_1 FSiz_{it} + \beta_2 FGwt_{it} + \beta_3 FLev_{it} + \varepsilon_{it}$ ……**Model 1**

$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \varepsilon_{it}$

…….……..**Model 2**

Where

EM = Earnings Management

ExD = Experience Diversity of Board i at year t

AgD = Age Diversity of Board i at year t

EdD = Education Diversity of Board i at year t

EthD = Ethnic Diversity of Board i at year t

GenD = Gender Diversity of Board i at year t

β1… β11 = Coefficients of the equations

t = Time

i = Firm

ε = error term

3.7.2 Moderated Effect Model

A moderator is a third variable that adjusts the strength of a causal relationship (Chikaraishi, Fujiwara, Kaneko, Poumanyvong, Komatsu & Kalugin, 2015). The moderation effects are typically viewed as an interaction between factors or variables, where the effects of one variable depend on levels of the other variable in analysis. The moderator variable affects the strength and/or direction of the relation between a

predictor and an outcome: enhancing, reducing, or changing the influence of the predictor (Fairchild & Mackinnon, 2009).

In model 3, Board Diligence which is a moderator was also tested so as to establish the contribution on the model. Then a cross product of the moderator with each independent variable was then computed. In model 4 to model 8, the interaction terms between the moderator and each of the independent variables was hierarchically tested.

Where;

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it} + \varepsilon_{it}$$

……**Model 3**

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it} + \beta_7 BD_{it}*ExD_{it} + \varepsilon_{it}$$

……**Model 4**

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it} + \beta_7 BD_{it}*ExD_{it} + \beta_8 BD_{it}*AgD_{it} + \varepsilon_{it}$$

……**Model 5**

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it} + \beta_7 BD_{it}*ExD_{it} + \beta_8 BD_{it}*AgD_{it} + \beta_9 BD_{it}*EdD_{it} + \varepsilon_{it}$$

……**Model 6**

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it} + \beta_7 BD_{it}*ExD_{it} + \beta_8 BD_{it}*AgD_{it} + \beta_9 BD_{it}*EdD_{it} + \beta_{10} BD_{it}*EthD_{it} + \varepsilon_{it}$$

……**Model 7**

$$EM_{it} = \beta_0 + C + \beta_1 ExD_{it} + \beta_2 AgD_{it} + \beta_3 EdD_{it} + \beta_4 EthD_{it} + \beta_5 GenD_{it} + \beta_6 BD_{it}$$

$$+\beta_7 BD_{it*} ExD_{it} + \beta_8 BD_{it*} AgD_{it} + \beta_9 BD_{it*} EdD_{it} + \beta_{10} BD_{it*} EthD_{it} + \beta_{11} BD_{it*} Gen_{it} + \varepsilon_{it}$$

…….**Model 8**

Where;

EM = Earnings Management

ExD = Experience Diversity of Board i at year t

AgD = Age Diversity of Board i at year t

EdD = Education Diversity of Board i at year t

EthD = Ethnic Diversity of Board i at year t

GenD = Gender Diversity of Board i at year t

BD = Board Diligence (Moderator)

C = Control Variable (, Firm Size Firm Growth and Firm Leverage)

β1… β11 = Coefficients of the equations

t = Time

i = Firm

ε = error term

3.8 Diagnostic Tests regression and panel data diagnostic tests.

Regression diagnostic tests are methods used to discover hitches fundamental to regression analysis and establish if various assumptions appear practical (Fox, 1991). Several assumptions requirements need to hold in a regression model before data is presented for analysis. These assumptions include; normality, autocorrelation multicollinearity, and heteroscedasticity (Hayes 2018).

3.8.1 Normality Test

Regression models assumed multivariate normality; this assumption is of the view that residuals must be normally distributed (Schmidt & Finan 2018). If this assumption does not hold, the effect reflects the sampling variance. Condition for normality serves to be necessary since the powers of F-tests and T-tests are very sensitive to normality. This condition assures that the ρ-values for the t-tests and F-test was valid. Studies have tested normality by using the Jarque-Bera and Shapiro Wilk tests. The null hypothesis for the test is normality, implying that the ρ-value is lower than the Prob> chi(2) for normality. This study used the Shapiro Wilk test, where if p values appear greater than 0.05, the null hypothesis is accepted, and the residuals are normally distributed.

3.8.2 Multicollinearity Test

Multicollinearity means that independent variables are positively correlated with each other. Values greater than 30 indicate strong multicollinearity among variables. This ultimately affects the correctness of the final estimate of the standard error of the regression coefficient. Various scholars have eliminated multicollinearity by centering the data while others have dropped a variable when there are high levels of correlation. Variance Inflation Factor (VIF) was used to test the hypothesis on multicollinearity. VIF = 1/T where T is the tolerance which is T=1-R^2.According to VIF, multicollinearity exists if the VIF values is 10 while values of 5 may indicate multicollinearity. Higher values of R^2 indicate the increased power of prediction between independent variables. Gujirati, Porter, & Gunasekar (2012) proposed that multicollinearity problems can be solved by increasing the sample size, data pooling, or dropping the variable.

3.8.3 Heteroskedasticity Test

Heteroscedasticity is a linear regression robust check for constant variance in error terms. If the error term proves to be different every time, the final estimate of the model may be misleading. To check for this assumption, Breuch –Pargan test was done. The decision to accept or reject the null was based on the P-values where the null hypothesis (Ho constant variance) was not rejected as the prob>chi2 =0.05 and rejected at prob<chi2=0.05.

3.8.4 Autocorrelation Test

According to Gujarati *et al* (2012), autocorrelation is "correlation between members of a series of observations ordered in time." The existence of autocorrelation in data makes the projected values of t, F, and $\chi 2$ inappropriate. Tests for autocorrelation in studies with panel data are done using techniques such as the Baltagi-Wu test, the Durbin Watson test, and the Breusch-Godfrey test. Drukker (2003) points out that these tests have numerous specification assumptions like the individual effects, a requirement for non-stochastic regressors, and the inability to work in heteroscedasticity. The study, therefore, used the Wooldridge test since this test is not affected by the limitations above. This technique serves to be capable of dealing with unbalanced panel data, with and without gaps in the observations (Drukker 2003). For this test, the beta is first estimated by regressing a change in the predicted variable at a point in time on a change in predicting variable at the same time and obtaining the residual. The absence of autocorrelation is fulfilled if %change in error (t), on (t-1) = -5

3.8.5 Stationarity Test

The basic assumption of a regression problem is that the data in a time series analysis is stationary. Stationary is in this context is to mean that the variables under in the

regression problem are constant over time (Nazlioglu, & Karul 2017). In cases where this assumption does not hold, there is a result of a bogus regression relationship and the validity of the t-test and F-tests. Stationary deduce that the mean, variance, and auto-covariance are not changing with time. Therefore, the study conducted multiple root tests on the variables using the Levin- Lin Chu test. In cases where the data fails to be stationary, the ultimate solution was de-trending the time series by using the first differences. In testing for this assumption, a condition to reject the null hypothesis holds when the test statistic results yield a p=chi < 0.05.

3.8.6 Hausman Test

In regression analysis, Hausman's test dictates the choice between fixed and random effects. In fixed effect regression, the analyst is in the will to control the time-invariant unobserved single effect correlated with the observed independent variables. The fixed effect regression model assumes that at any time, the traits are unique in the variables thus, there is no association between the variables' traits. On the other hand, the random effect assumes there exists a random variation among variables and the effect is uncorrelated to the predictor variables (Greene 2003).

Hausman's test consists of two hypotheses; the null hypothesis with the favored model to be the random effect, while the alternative hypothesis goes with the fixed effect. If ρ-value <0.05, the null hypothesis is rejected; hence the fixed-effect model should be **used; otherwise, the random-effect model.**

3.9 Ethical Consideration

The study's ethical concerns were addressed by ensuring complete accuracy in order to prevent any false conclusions from being drawn. There was a strict prohibition against using the data for anything other than analyzing the results of the study. To

safeguard their identity, the names of the board members were not revealed. No specifics about anyone's life were revealed, only broad demographics. A number of additional authors' efforts were recognized and quoted.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the statistics of the data collected. It covers descriptive statistics, test of assumptions of the regression analysis, panel data diagnostic tests, panel regression models result, as well as their interpretations.

The focus of the study was on companies listed on the Nairobi Stock Exchange (NSE), and secondary data, namely audited financial reports obtained from the Capital Markets Authority (CMA), were utilized. A panel data analysis was conducted on 48 listed companies that fulfilled the study's inclusion criteria. The inclusion-exclusion criterion of the study excluded companies that were not consistently in operation and those that were listed on the NSE after 2006. Companies from various industries, including agriculture, automobiles and accessories, finance, commercial and services, construction and allied, energy and petroleum, investment, manufacturing, and allied, were represented. From 2006 to 2015, a total of 480 firm-year observations was collected over the course of a decade using panel data. Justifying a large number of observations, Creswell (2014) stated that a large N is required to undertake meaningful statistical tests in quantitative research.

4.2 Descriptive Statistics

This section presents the overall, sector-wise and yearly descriptive statistical results of the study variables.

4.2.1. Descriptive Statistics of Study Variables

The study first reported the data descriptive statistics for the study variables as derived from the data. The descriptive statistics contained measures of central tendencies (means and standard deviation statistics, minimum and maximum) with a total of 480 observations. The data from the analysis is presented in Table 4.1.

The mean of earnings management, measured by accruals was 214.26 (standard deviation = 3537.76, minimum= -2527.62 and maximum =54712.42). The negative value of real earnings management implies that on average, the entities engaged in real earnings management but at lower levels. This shows that firms listed at Nairobi Securities Exchange, engage in real earnings management, but the rate of manipulation, differs across companies and also over time. To evaluate the contribution of experience on the earnings management, the study considered directors with experience of above 10 years. On average, most of the firms had approximately ten directors with experience of above 10 years. However, some of them never had whereas others had twenty-four on the highest side (Mean = 9.87, SD = 3.97, Max = 24, Min = 0). The study found that on average directors who were above 40 years old were nine on average with some firms having none while others had sixteen on the higher side. On educational levels, the study considered directors who had undergraduate and postgraduate education levels out of whom approximately ten was the average number in most firms with others having none and the highest was reported to have 20 directors (Mean = 8.68, SD = 3.37, Max = 16, Min = 0). Board education qualification had a mean of 9.91 (standard deviation = 3.72, minimum = 0, maximum = 20). These results suggest that on average, the boards had a high number of board members with undergraduate and postgraduate education qualification. Considering different ethnic combinations, the study found that most

listed companies on average had five ethnic combinations with the least reporting to have two and the highest being twelve (Mean = 4.65, SD = 1.99, Max = 12, Min = 2).

On gender diversity, the study established that female directors were between one and two on average for most of the firms under study with others having no female director whereas others having four of them on the highest (Mean = 1.40, SD = 1.20, Max = 4, Min = 0). Board diligence had a mean of 6.52 (Standard deviation = 3.52, Minimum = 2, Maximum = 33).

Firm size had a mean of 16.66 with a dispersion of 1.81 standard deviations as shown in Table 4.1. The minimum firm size was 2.02 and the maximum was 9.86 which indicate much disparity in firm sizes listed at the NSE. Firm growth had a mean of 6.80 (SD = 2.65, Minimum =2.33, Maximum =8.65). Firm leverage had a mean of

From the descriptive statistics, the study found out that earnings management (accruals), was 214.26 million on average with the minimum being -2527.62 million with maximum being 54712.42 million.

On the other hand, considering different nationality combinations, the study found that most listed companies on average had five nationality combinations with the least reporting to have two and the highest being twelve. The study found that on average directors who were above 40 years old were nine on average with some firms having none while others had sixteen on the higher side. Female directors were between one and two on average for most of the firms under study with others having no female director whereas others having four of them on the highest. Board diligence was seven on average. Table 4.1 illustrates more other features like standard deviation and range for earnings management.

Table 4. 1: Summary Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Earnings Management	480	214.26	3537.76	-2527.62	54712.42
Experience	480	9.87	3.97	5	16
Age diversity	480	8.68	3.37	28	45
Educational level	480	9.91	3.72	1	4
Nationality	480	4.65	1.99	2	12
Gender diversity	480	1.40	1.20	1	3
Board Diligence	480	6.52	3.52	2	33
Firm Size	480	16.66	1.81	2.02	9.86
Firm Growth	480	6.80	2.65	2.33	8.65
Leverage	480	3.89	1.28	1.03	2.78

Source:(Author's ,2023)

4.3 Diagnostic tests

Prior to selecting which panel regression model to use, and to eliminate spurious regression problems some robustness tests were carried out, such as a normality tests, multicollinearity, unit root test, test for heteroscedasticity, autocorrelation test, and specification error test.

4.3.1 Normality Test

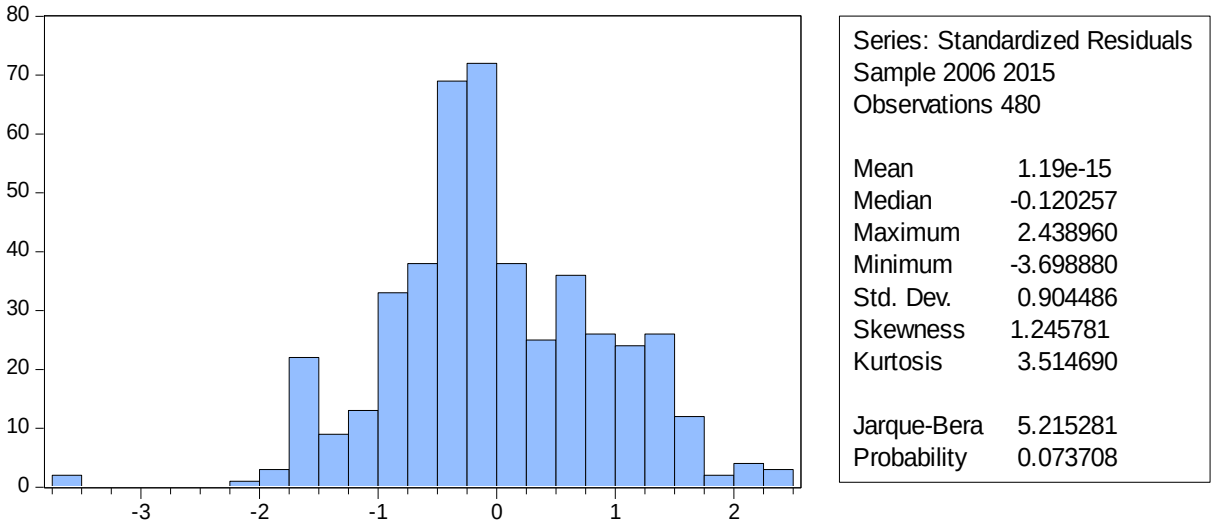
To check for the normality assumption, Jarque-Bera, test was conducted and the hypotheses tested at a 0.05 significance level. Under the Jarque-Bera Test, if the X^2 probability value is lower than the significance level of 0.05, then the null hypothesis is rejected, and it can therefore be concluded that the data is not normally distributed. On the contrary, if the p-value is greater than 0.05, then the null hypothesis is not

rejected meaning the data is normally distributed. This test checked for the normality assumption basing on the hypotheses that:

Ho: The data follows a normal distribution Ha: The data does not follow a normal distribution.

In table figure 4.1, the p-value (Jarque-Bera X^2 = 0.073708) is greater than 0.05 meaning the null hypothesis cannot be rejected. This therefore implies that the data was normally distributed. Additionally, the skewness (p = 1.245718), kurtosis (p =3.514690) were greater than 0.05, also proving that the data was asymptotically normally distributed.

Figure 4. 1: Normality test



4. 3.2 Multicollinearity

Multicollinearity means that two or more of the independent variables are highly correlated. Multicollinearity can have damaging effects on the results of multiple regressions. Statistically, multicollinearity is present when correlation coefficients are

above 0.9 (Hair, 2006; Saunders, Lewis, & Thornhill, 2009), 0.8 (Garson, 2013; Gujarati, 2012), and 0.7 (Sekaran & Bougie, 2010). High Variance Inflation Factors of 10 and above is an indication of a multicollinearity problem, while Variance Inflation Factors less than 10 are adequately low and implies lack of collinearity (Thompson et al., 2017). The VIFs of the independent variables in this study table 4.2 were all less than 10 implying that there is no multicollinearity between the predictors.

Table 4. 2: Multicollinearity

Statistic	VIF	Tolerance
Experience Diversity	1.050	0.953
Age Diversity	1.024	0.977
Education Diversity	1.036	0.944
Ethnic Diversity	1.032	0.969
Gender Diversity	1.059	0.944
Firm Size	1.018	0.982
Firm Growth	1.014	0.986
Firm Leverage	1.018	0.983
Earnings Management	1.014	0.986

4. 3.3 Heteroscedasticity Assumption

When performing a regression analysis, it is preferable to test the assumption that the data has a constant variance. According to Gujarati (2003), when dealing with heteroscedasticity, the estimators become inefficient, calling into question the usefulness of the standard hypothesis-testing approach. The Breusch-Pagan test and White's test were employed to examine the study's adherence to the homoscedasticity assumption. The hypothesis testing was done at a 5% level of significance.

The null hypothesis (Ho) under the Breusch-Pagan test assumes homoscedasticity, whereas the alternative (Ha) assumes heteroscedasticity. The p-value in Table 4.3 is 0.255, which is greater than 0.05, indicating that the null hypothesis is not rejected;

therefore, there is no heteroscedasticity issue. In contrast, the variance of error is constant (homoscedasticity).

Table 4. 3: Breusch-Pagan

Breusch-Pagan test:	
LM (Observed value)	10.142
LM (Critical value)	15.507
DF	8
p-value (Two-tailed)	0.255
alpha	0.05

4. 3.4 White's test for Homoscedasticity

White's test was also used to further examine the homoscedasticity assumption. Since the p-value (0.184) is greater than 0.05, the null hypothesis (Ho) is not rejected, and the results in Table 4.4 demonstrate homoscedasticity. Therefore, the error variance is stable, since the p-value is not statistically significant.

Table 4. 4: White's test

White test:	
LM (Observed value)	52.237
LM (Critical value)	60.481
DF	44
p-value (Two-tailed)	0.184
alpha	0.05

4.3.5 Unit Root Test

To prevent estimates from fluctuating over time due to non-stationarity, unit root tests were done to all research variables to examine or detect non-stationarity. In this instance, all investigated variables were submitted to the Levin-Lin-Chu unit-root test. In this test, if non-stationary variables are discovered, initial differencing is done until the bias is abolished. In this situation, the null hypothesis was that the variable under

investigation which was non-stationary or possessed unit roots. In this study, the null and alternative hypothesis were presented as follows: null hypothesis: panels contain unit roots; alternative hypothesis: panels are stationary. Table 4.5 demonstrates that the Levin-Lin-Chu unit-root test revealed that all variables had p values less than the 0.05 significance level, therefore rejecting the null hypothesis (that the variables had unit root). In other words, non-stationary was absent.

Table 4. 5: Levin-Lin-Chu unit-root test

Levin-Lin-Chu unit-root test	**Statistic**	**Prob.****
Earnings Management	-12.74	0.0000
Experience Diversity	-19.56	0.0000
Education Diversity	-2.79	0.0026
National Diversity	-3.03	0.0012
Gender Diversity	-17.48	0.0000
Board Diligence	-10.18	0.0000
Firm Size	-5.40	0.0000
Firm Growth	-10.96	0.000
Firm Leverage	-31.41	0.000

** Probabilities are computed assuming asymptotic normality

4.4 Correlation Analysis

The purpose of a correlation analysis is to measure the degree of association between any two independent variables. The correlation coefficient between +1 and -1 is the range of measurement. It also allows for the prediction of multicollinearity, which is assumed to be present whenever there is a perfect linear association between the variables in question. The correlation matrix was used to find out if any two

independent variables were very similar by comparing the correlation coefficients of the two sets of variables. From the results in table 4.6, most correlations had positive association with few pairs exhibiting negative association. From the Pearson pairwise correlation, the results display a weak negative relationship between age diversity and earnings management (r= -0.029*; ρ< 0.05*) this implies that as values of age to diversity increase firms become earnings management. It can therefore be concluded that earnings management of listed firms is impacted negatively by age to diversity. Experience Diversity (r= 0.025*; ρ< 0.05*) this also provides that as board experience diversity enhances, firm's earnings management is impacted positively. More so results indicate that Education Diversity and earnings management have insignificant correlation (r= 0.154*; ρ< 0.05*).

Additionally, results from correlation indicate a positive and a significant association between Ethnic diversity and earnings management (r= 0.041*; p<0.05).* This imply that a more nationality diverse board impacts earnings management positively. The study can therefore recommend that firms should hold more nationality diverse board as it affects the quality earnings management.

Further, results show that gender diversity is insignificant effects with earnings management as shown r=0.380 and p<0.05).

Table 4. 6: Correlation Matrix

Correlation Observations	1	2	3	4	5	6	7
Earnings Management	1						
Age Diversity	**-0.029 ***	1					
Experience Diversity	**0.025 ***	-0.039	1				
Education Diversity	0.154	-0.030	0.183	1			
National Diversity	**0.041 ***	0.054	0.036	-0.002	1		
Gender Diversity	-0.063	0.014	0.029	0.081	0.072	1	
Board Diversity	**0.042 ***	0.044	0.109	0.24	-0.004	0.032	1

Multicollinearity is present if the correlation coefficient is equal to or greater than 0.80 in absolute value. Bryman & Cramer (1997) suggests that Independent variables having a coefficient in excess of 0.8 may be suspected of displaying multicollinearity, hence it is important to keep Pearson's 'r' below 0.8 when analyzing relationships between pairs of variables. As indicated in Table 4.6, the research found some pairs with higher correlation which is the threshold to permit dropping such pairs or differencing. The study opted not to drop any pair that was considered highly collinear, and instead it undertook first differencing of either one or both of the variables under hypothesis but those that formed part of the highly correlating pairs as a remedy.

4.5 Random Effects and Fixed Effects

It is possible for panel data to be affected by the errors caused by firms operating in diverse industries. The purpose of the study was therefore to ascertain whether to conduct regressions with random or fixed effects. To make the decision, a regression with random and fixed effects was conducted, and then Hausman's tests were conducted for each model to inform the decision.

Table 4. 7: Random Effects

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Periods included: 10
Cross-sections included: 48
Total panel (unbalanced) observations: 476
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-5.089	0.936	-5.436	0.000
Experience Diversity	0.002	0.073	0.031	0.976
Age Diversity	-0.091	0.073	-1.244	0.214
Education Diversity	2.264	0.907	2.497	0.013
National Diversity	0.069	0.112	0.611	0.541
Gender Diversity	-0.406	0.222	-1.825	0.069
Board Diligence	-0.053	0.076	-0.698	0.486
Firm Size	-0.350	1.814	-0.193	0.847
Firm Growth	0.596	1.825	0.326	0.744
Firm leverage	-0.009	0.032	-0.287	0.774
Effects Specification				
			S.D.	**Rho**
Cross-section random			0.473	0.275
Idiosyncratic random			0.768	0.725
Weighted Statistics				
R-squared	0.026	Mean dependent var		-1.357
Adjusted R-squared	0.007	S.D. dependent var		0.774
S.E. of regression	0.771	Sum squared resid		277.202
F-statistic	1.385	Durbin-Watson stat		1.656
Prob(F-statistic)	0.192			
Unweighted Statistics				
R-squared	0.028	Mean dependent var		-2.964
Sum squared resid	384.976	Durbin-Watson stat		1.192

4.6 Results of the Fixed Effect Regression

The fixed-effect model considers each firm's independence or cross-sectional unit incorporated in the sample allowing the intercept varies for each company but still assumes that the slope of the coefficients is stable within the companies. Table 4.8 highlights the regression results for the fixed model.

Table 4. 8: Fixed Effect

Dependent Variable: Y
Method: Panel Least Squares
Periods included: 10
Cross-sections included: 48
Total panel (unbalanced) observations: 476

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-7.949	2.075	-3.831	0.000
Experience Diversity	0.008	0.075	0.112	0.911
Age Diversity	-0.103	0.074	-1.397	0.163
Education Diversity	6.185	2.660	2.325	0.021
Ethnic Diversity	0.075	0.115	0.649	0.517
Gender Diversity	-0.389	0.245	-1.590	0.113
Board Diligence	-0.057	0.079	-0.731	0.465
Firm Size	0.045	1.839	0.024	0.981
Firm Growth	0.209	1.849	0.113	0.910
Firm Leverage	-0.021	0.033	-0.631	0.529
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.376	Mean dependent var		-2.964
Adjusted R-squared	0.293	S.D. dependent var		0.913
S.E. of regression	0.768	Akaike info criterion		2.422
Sum squared resid	247.151	Schwarz criterion		2.921
Log likelihood	-519.426	Hannan-Quinn criter.		2.618
F-statistic	4.511	Durbin-Watson stat		1.865
Prob(F-statistic)	0.000			

4.6.1 Regression Results for Random Effects GLS Model

Adoption of the random effects model was predicated on the finding that accrual earnings did not have a common impact size in terms of earnings and the primary purpose of determining the contribution of various significant factors. After undertaking model selection test, the REM variant with or without a control were considered effective for further interpretation (see appendix 3). Table 4.9 shows the results of the estimated model.

Table 4. 9: Results for Random Effects Regression Model

Random-effects GLS regression — Number of observations = 480
Group variable: compcode — Number of groups = 48
R-sq: — Obs per group:
Within = 0.391 — min = 10
Between = 0.7550 — avg = 10.0
Overall = 0.5284 — max = 10
Wald chi2 (5) = 13.8
Prob > chi2 = 0.0164

Earnings Management	Coefficient.	Std. Err.	z	P>z	[95% Conf.	Interval]
Board Diligence	108.3776	46.52016	2.33	0.020	17.19979	199.5555
Age Diversity	261.0921	107.9819	2.42	0.016	49.45144	472.7327
Education Diversity	-253.8997	105.2812	-2.41	0.016	-460.247	-47.5524
National Diversity	-49.69691	88.09587	-0.56	0.573	-222.3616	122.9678
Gender Diversity	341.1976	161.0057	2.12	0.034	25.6322	656.763
_cons	486.6257	590.9991	-0.82	0.410	-1644.963	671.7114

Source: Author's computation

The findings of table 4.9 indicate that the impact of the five variables (Board Diligence, age Diversity, education Diversity, ethnic Diversity and Gender diversity) accounts for 52.84 percent of the variance in earnings management (R Square =0.5284). The regression model fitted the data and thus applied correctly (chi2 (5) =13.8, P<0.05). Precisely, unit change in age diversity led to a 261.09 percent variation in earnings management while unit variation education diversity causes a -253.89 percent change in earnings management. Moreover, a change in gender diversity resulted to a 341.20 change in earnings management and a unit variation in board diligence is associated with 108.38 variation in earnings management.

4.7 Hausman Specification Model

When estimating the interdependence of variables, a panel data model can employ either a fixed effect or a random effect model. The Hausman test provides insight into

the choice between fixed and random effects, including the justification for choosing random effects if the error components are associated (Torres-Reyna, 2007). Hausman's test was performed to choose between a random and a fixed effects model, which Hausman (1978) devised. The alternative hypothesis (Ha) proposes a fixed effect model, while the null hypothesis (Ho) proposes a random effect. To run the regression models, the fixed effect model must be utilized because the null hypothesis was rejected ($p < 0.05$) at the 0.05 significance level. To choose between the fixed and random effects estimators for the upcoming regressions, a Hausman specification test was performed after running the two regression models. The results of the Hausman test provided in the table guided the choice between using fixed effect and random effect models in conducting the regression. Neither the chi-square value nor its p-value ($X^2 = 0.1633$; $p > 0.05$) were statistically significant, as shown in the table. The appropriateness of the random effect (the random effect's null hypothesis) was thus not refuted. In order to test the hypotheses, it was determined by Hausman's test that a random effects model should be used for the ensuing regression analyses.

Table 4. 10: Test for Model Selection: REM versus FEM

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.9852	9	0.163

Cross-section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
Constant	-5.089	0.936	-5.436	0.000
Experience Diversity	0.008	0.002	0.000	0.708
Age Diversity	-0.103	-0.091	0.000	0.202
Education Diversity	6.185	2.264	6.252	0.117
National Diversity	0.075	0.069	0.001	0.813
Gender Diversity	-0.389	-0.406	0.010	0.870
Board Diligence	-0.057	-0.053	0.000	0.826
Firm Size	0.045	-0.350	0.091	0.190
Firm Growth	0.209	0.596	0.087	0.191
Firm Leverage	-0.021	-0.009	0.000	0.185

Effects Specification			
R-squared	0.376	Mean dependent var	-2.964
Adjusted R-squared	0.293	S.D. dependent var	0.913
S.E. of regression	0.768	Akaike info criterion	2.422
Sum squared resid	247.151	Schwarz criterion	2.921
Log likelihood	-519.426	Hannan-Quinn criter.	2.618
F-statistic	4.511	Durbin-Watson stat	1.865
Prob(F-statistic)	0.000		

4.8 Regression Results

The study's purpose was to determine the moderating effect of board independence on the relationship between board diversity and earnings management. A hierarchical regression model was applied to check for both direct and moderating effects of the independent and moderating variables respectively on earnings management. In the hierarchical regression; the first model regressed the dependent and the controls variables, second model regressed the dependent, controls, independent and the moderator while models four to seven regressed the dependent, controls, independent and moderator by gradually introducing the interactions to test the hypotheses. All the models adopted the random effects models as suggested by the Hausman's tests

conducted to decide between the random and fixed effects. The research hypotheses were tested at a 0.05 significance level where a p-value less than 0.05 rejects the null hypothesis

4.9 Testing the Effect of the Control Variables

Table 4.16 indicates that the overall first model, was significant (F-value = 1.464; $\rho<0.05$. The p-value was less than 0.05 indicating that the overall model was fit. The control variable Firm size (FS) had a negative and insignificant (β= -1.190; $\rho>0.05$) effect on earnings management. Similarly, firm growth had a positive and insignificant (β= 1.454; $\rho>0.05$) effect on earnings management. In the same vein, firm leverage had a positive and insignificant (β= 0.059; >0.05) effect on earnings management.

Table 4. 11: Regression results for control variables

Dependent Variable: Y(Earnings Management)
Method: Panel Least Squares
Periods included: 10
Cross-sections included: 48
Total panel (unbalanced) observations: 476

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-3.473	0.603	-5.759	0.000
Firm Size	-1.190	2.059	-0.578	0.564
Firm Growth	1.454	2.069	0.703	0.483
Firm Leverage	0.059	0.033	1.790	0.074
R-squared	0.009	Mean dependent var		-2.964
Adjusted R-squared	0.003	S.D. dependent var		0.913
S.E. of regression	0.912	Akaike info criterion		2.662
Sum squared resid	392.523	Schwarz criterion		2.697
Log likelihood	-629.523	Hannan-Quinn criter.		2.676
F-statistic	1.464	Durbin-Watson stat		1.176
Prob(F-statistic)	0.000			

4.10 Testing the direct effects

A random effects regression model was conducted for the effects of experience diversity, age diversity, education diversity, ethnic diversity and gender diversity on earnings management while controlling for the effects of firm age firm growth and firm leverage. The results presented in table shows the resulting output which indicates that the overall model was significant ($p<0.05$; $F = 3.206$). The R-square (0.009) for the model means that the variables accounts for up to 0.9% of the variation in earnings management.

Table 4. 12: Results for direct effect

Dependent Variable: Y
Method: Panel Least Squares
Periods included: 10
Cross-sections included: 48
Total panel (balanced) observations: 480

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-4.258	0.491	-8.671	0.000
Experience Diversity	-0.008	0.080	-0.105	0.916
Age Diversity	-0.048	0.083	-0.573	**0.037**
Education Diversity	1.781	0.509	3.502	**0.001**
National Diversity	0.132	0.121	1.087	0.278
Gender Diversity	-0.359	0.205	-1.753	**0.020**

R-squared	0.033	Mean dependent var	-2.956
Adjusted R-squared	0.023	S.D. dependent var	0.914
S.E. of regression	0.904	Akaike info criterion	2.649
Sum squared resid	387.428	Schwarz criterion	2.701
Log likelihood	-629.669	Hannan-Quinn criter.	2.669
F-statistic	3.206	Durbin-Watson stat	1.193
Prob(F-statistic)	0.002		

4.11 Testing the complete effect of moderation

When one variable acts as a moderator, the causal link between the two other variables shifts. This means that the moderator's influence on the endogenous variable

should be measured separately from the exogenous variable in the statistical test of moderation. To amplify the effect of the predictor (IV) on the outcome (DV), a moderator's strength must be increased; to attenuate the effect of the predictor (IV) on the outcome (DV), a moderator's strength must be decreased; or to reverse the effect of the predictor (IV) on the outcome (DV), its strength must be increased (Hayes, 2013). If all three of the following are true, then we can say that moderation exists. To begin, there should be a large gap between the amount of variance explained with and without interaction. Second, the interaction term's coefficient needs to be non-zero. In order to investigate the nature of the interaction, we can use this simple slope as a starting point. Finally, the interaction should have a statistically significant effect in both the full models with and without it (Hayes, 2013).

Table 4. 13: Testing the complete effect of moderation

Dependent Variable: Y
Method: Panel Least Squares
Periods included: 10
Cross-sections included: 48
Total panel (unbalanced) observations: 476

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-4.049	1.031	-3.926	0.000
Experience Diversity	0.153	0.171	0.895	**0.010**
Age Diversity	0.122	0.188	0.649	0.062
Education Diversity	0.291	1.337	0.217	**0.028**
Nationality Diversity	0.208	0.713	0.292	**0.026**
Gender Diversity	-0.346	0.207	1.667	**0.016**
Board Diligence	0.030	0.171	0.177	0.860
ED*BD	-0.322	0.278	-1.160	**0.047**
AD*BD	-0.331	0.313	-1.059	**0.010**
EL*BD	0.967	0.935	1.034	**0.002**
ND*BD	0.365	0.818	-0.446	**0.015**
GD*BD	0.047	0.237	1.253	**0.014**
FS	-1.066	2.063	-0.516	0.606
FG	1.337	2.077	0.644	0.520
FL	0.031	0.034	0.921	0.357
R-squared	0.041	Mean dependent var		-2.964
Adjusted R-squared	0.014	S.D. dependent var		0.913
S.E. of regression	0.907	Akaike info criterion		2.671
Sum squared resid	379.761	Schwarz criterion		2.793
Log likelihood	-621.657	Hannan-Quinn criter.		2.719
F-statistic	1.536	Durbin-Watson stat		2.204
Prob(F-statistic)	0.001			

4.12 Testing of Hypotheses

HO_1: There is no significant correlation between experience diversity of board of directors and earnings management.

The hypothesis experience diversity of board has no significant effect on earnings management of listed firms in Kenya was rejected. Results from table 4.13 indicate *(β =*0.153*, $p<0.05$)* therefore there was insignificant effect. From the coefficient, there is a positive association between experience diversity and earnings management. Furthermore, Khan and Kamal (2021) found that

companies with professional and previous working experience directors on their boards will reduce earnings manipulation. The director's professional expertise, especially accounting expertise, is one of the crucial features in their monitoring role (Qiao , Chen and Hung,2018). This quality of directors constrains management from EM. Dienes and Velte (2016) argue that it is impossible for board members without sufficient financial expertise to advise other board members. Using a sample of 86 industrial companies listed on the Amman Stock Exchange from 2007 to 2010; Alzoubi (2018) found that the financial expertise of the board is significant and negatively associated with EM, thus suggesting that board members with accounting and finance expertise are efficient in limiting EMMoreover, the study (Siam et al,2014) by posited that for the monitoring process and to make the financial statements more transparent, directors must have the expertise (accounting cum past working experience) that will enable them to curb EM.

HO_2: There is no significant relationship between the age diversity of board of directors and earnings management.

The results of the independent variables reveal that age diversity has positive coefficient value of (β= 0.122; ρ>0.05) is statistically insignificant indicating age diversity doesn't enhances the earnings management. Therefore, we failed to rejected the null hypotheses and the findings contradicted to those of Uzun, Szewczyk and Varma (2004) who studied US based firms and Chen *et al.,* (2006) in China. However, they are similar with Persons (2005) who found no significant relationship between age diversity and the earnings management among firms listed in the Accounting and Auditing Enforcement Releases by SEC

HO_3: There is no significant relationship between education diversity of the board of directors and earnings management.

Informed by (β_2 =0.291, P <*0.05*) the study indicates a positive and a significant positive effect of education diversity on earnings management of listed firms in Kenya rejecting the null hypothesis. More so, these findings are in line with the finding from studies by Kithandi & Katua (2019) who support the same, contrary this finding contradict with the findings of Zulaika (2016)

and Ji (2019) who record a negative effect of education diversity on earning management.

HO_4: There is no significant relationship between Ethnic Diversity of the board of directors and earnings management.

The results confirm that the effect of Ethnic Diversity on the earnings management of firms was negative and significant ($\beta = 9.045722$, $\rho = 0.000$). Therefore, H_{04} is rejected and the conclusion made is that the Ethnic Diversity reduces the earnings management the results agree with those of previous studies (Beasley, 1996). However, they contradict of Uzun *et al.*, (2004) who found no statistically significant relationship between Ethnic Diversity among US firms. Shan *et al.*, (2013) and Chen *et al.*, (2006) found a positive association between Ethnic Diversity and earnings management.

HO_5: There is no significant relationship between gender diversity on the board of directors and earnings management.

Gender diversity had a negative and significant relationship with earnings management. *(β =*-0.346*, $p<0.05$)* which is consistent with the findings of Muttakin and Ullah (2012) and Ofoeda (2017). This depicts that Gender diversity of the board in Kenya listed firms are not performing effectively in profit generation. It can be understood that most of the female directors of the board are coming from family which results in their inactiveness in the board. Previous studies have found that female directors bring varying reasoning to the board because of differences in their knowledge and experiences from their male colleagues (Đặng et al., 2020). Recent research studies further demon-strate female directors are ethical and risk-averse in financial decision-making (Doan & Iskandar- Datta, 2020; Yahya et al., 2020)

HO_{6a}: Board diligence does not moderate the relationship between experience diversity and earnings management.

The interaction term of Board diligence and likelihood of earnings management a beta coefficient $\beta = -0.322$, and $\rho < 0.05$, therefore the null hypothesis was rejected. Based on these findings, one-unit interaction between

experience diversity and Board diligence is likely to reduce earnings management by -0.322 units.

HO_{6b}: Board diligence does not moderate the relationship between age diversity and earnings management.

The interaction term of Board diligence and earnings management a beta coefficient β= -2.512, and ρ < 0.05, therefore the null hypothesis was rejected. Based on these findings, one-unit interaction between age diversity and board meetings frequency is likely to reduce earnings management by 2.512 units.

HO_{6c}: Board diligence does not moderate the relationship between education diversity and earnings management.

The interaction term of Board diligence and earnings management a beta coefficient β= 0.291 and ρ < 0.05, therefore the null hypothesis was rejected. These findings suggest that one-unit interaction between Board diligence and education diversity is likely to enhance earnings management by 0.291units.

HO_{6d}: Board diligence does not moderate the relationship between nationality diversity and earnings management.

The interaction term of nationality diversity and earnings management a beta coefficient β= 0.365, and ρ < 0.05, therefore the null hypothesis was rejected. These findings suggest that one-unit interaction between Board diligence and nationality is likely to increase earnings management by 0.365 units

HO_{6e}: Board diligence does not moderate the relationship between gender diversity and earnings management.

Results also indicated a significant moderating effect of Board diligence on the relationship between gender diversity and earnings management *(β*= 0.047*; ρ <0.05).* This indicates that Board diligence the enhance effect of gender diversity on earnings management. This result concurs with literature

from Kaplan (1998) on advantages of keeping enough cash at disposal since it lessens financial distress among firms.

4.13 Interpretation and Discussion of the Study Findings

In this section, the study interprets the results as well as discusses the implication relating with the literature reviewed. From the study results, holding other factors constant, earnings management will be greater by 486.82 million shillings.

Board diligence was also shown to have a significant influence on earnings management at 5 percent level. The study found that an extra board meeting led to increase in earnings management by 108.31 million shillings holding another factors constant. This implies more board meetings requires more resources to maintain the team which is relatively expensive to acquire in terms of per diems and other off town meetings costs. This result differs with the study finding obtained by Iraya, Mwangi, & Wanjohi, (2014) who discovered that a larger number of board meetings had a negative impact on profits management.

Age of directors was found to have a significant influence on earnings management. The study found out that an additional member aged 40 years and above to the board significantly increases earnings management at 10 percent level by 261.09 million shilling holding all other factors constant. The results may be associated with the fact that older members of the board would be under pressure to perform in an organization and may end up manipulating financial information to prove their relevance. Considering age, studies shows that age is an important variable which influences behavior, beliefs, values and attitudes, as well as strategic orientation (Child, 1972; Taylor, 1975; Herrmann and Datta, 2005). Wiersema and Bantel (1992). This was shown not to be a significant determinant of earnings management.

On educational diversity, the study found out that directors with undergraduate and postgraduate level of education reduced earnings management by 253.9 million shillings holding another factors constant. Considering educational attainment, the level of education was found to help the board members understand well how to manage such an institution (Tarus and Tuwey, 2015). This concurred with this study results that earnings management lowered as more and more directors with undergraduate and postgraduate level of education join the boards, the less the cases of earnings management are experienced.

On gender diversity, the study found out that an additional female director to the board raises earnings management by 341.2 million shillings holding another factors constant. Moreover, the individual effect was statistically significant. According to Kang et al., (2007), women directors are more concerned with social concerns and stakeholder wellbeing. Furthermore, the study's findings contradict the assumption that directors from a range of backgrounds may assist widen corporate governance above shareholders to embrace additional stakeholders like local communities, workers, and special interest groups. However, Bear et al. (2010) discovered that the proportion of women on a firm's board of directors had an indirect impact on the firm's CSP, which in turn affected the company's overall reputation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The results of the research are summarized and some generalizations are drawn in this chapter. A decisive recommendation is also provided based on the modeled findings on Board Diversity and earnings management for the firms listed on the NSE over the study period.

5.2 Summary of the study findings

Diverse boards are in high demand and for good reasons in today's rapidly evolving global economy, companies of all stripes can benefit from having fresh perspectives and perspectives brought to the table by having board members from a variety of backgrounds and experiences. This perspective is grounded in the observation that boards with wider range of background and experience tend to provide superior results since the members bring varied and complementary skills to the job of management. Kenya's international standing suffered as a result of immoral actions including fraud and corruption that cast doubt on the reliability of auditing and reporting standards, the security of investors and the safety of minority shareholders.

Recent business failures have prompted widespread speculation that many directors place their personal interests ahead of that of the stakeholders and the company. While both fraud and earnings management share similarities and distinctions, the former is typically justified by the latter on the grounds that the latter is illegal. It is based on this that the current study endeavored to access the impact which board diversity has on earnings management. Specific objectives include examining the effect of experience diversity of board of directors; assess the extent to which the age

diversity of directors; determine the influence of educational diversity on the board of directors; determine the influence of ethnic diversity of the board of directors and lastly determine the effect of gender diversity on the board of directors on earnings management. From the literature, board diligence was among the factors that can affect earnings management. The study included this variable as a control variable.

The study used NSE data for the period 2006-2015 for listed firms where 48 firms which traded consistently for the 10-year period at NSE were considered. The study employed STATA software in estimation of the model. Major panel statistical tests were performed to validate the estimates. As determined by the Hausman specification test, the random effects model is superior to the fixed effects one. The study assessed significance at 5%.

From the study results, age diversity, gender diversity and board diligence and education diversity were statistically significant both at 5% level while ethnicity diversity was found to be statistically insignificant in determining earnings management.

5.3 Conclusions

The findings demonstrated that lower levels of earnings manipulation were associated with boards that included a higher proportion of independent directors and members with financial expertise. This bolsters the idea that the best board members to reduce earnings management are those who possess both financial acumen and independence. The research also demonstrates that having female members on the board significantly lowers earnings management by discouraging managers from acting in an opportunity.

The results of this study reveal that experience diversity has no effect on earning management, i.e., having board members does not improve a company's ability to earn money. The study's findings refute earlier research and emphasize how little professional experience matters in reducing earnings management.

According to the findings, age diversity enhances profit management, meaning that having younger board members improves and raises company performance. Additionally, variety in schooling improves earnings management.

However, gender diversity has a detrimental impact on the management of earnings. Therefore, companies that increase the proportion of women on their board of directors will improve earnings management. The study's final conclusions show that Ethnic Diversity has no bearing on how revenues are managed. The findings imply that varying the proportion of women on the board improves earnings management. Understanding how female directors affect earnings management is crucial for guiding efforts to improve global reforms that call for increased female representation on corporate boards in order to improve the effectiveness of financial reporting.

Additionally, the board should make sure that the company is acting on chances that increase the value and wealth of all stakeholders in addition to stopping the negative management pursuit that could result in corporate scandals or failures. In order to comprehend the role of the board, one must acknowledge that boards are made up of a group of people who combine their skills and talents to represent the social capital that each member of the board contributes to the corporation's ability to carry out its governance function. According to this theory, strengthening and diversifying the corporate board structure inside each company will shield shareholders against manipulations of earnings efficiency of reporting

The outcomes confirm the advantages of having a diverse and gender-balanced board. In actuality, the inclusion of female members lessens the impact of earnings management strategies. Furthermore, the findings demonstrate the significance of Kenyan laws pertaining to the implementation of female quotas on boards. The legislator could improve the legal framework to prioritize investor protection in order to stop high-profit companies from manipulating their earnings. Businesses can also encourage directors to engage in cooperative activities, which may reduce conflicts among board members when they work in groups. manipulations by strengthening and diversifying the corporate board structure within their individual companies.

Subsequent research revealed that board diligence had a negative moderating influence on experience, age, and national diversity, but a positive moderating effect on education and gender diversity. These CEOs would try to refrain from misusing REM's deceptive earnings in order to avoid long-term repercussions. The benefits of the BD are still applicable in this case when female directors make the corporate board structure in their individual companies more diverse and powerful, allowing a reasonable level of EM manipulations.

5.4 Policy Recommendations

Earnings management by nature misleads stakeholders who may end up quitting to invest elsewhere especially in firms that need to sustain themselves in the field for many decades to come. Boards of directors, who are ranked the highest level of the organization's internal control structure are essential for ensuring the reliability of financial statements. Accounting manipulations are costly for investors and other market participants hence boards should try to limit them. There is need for firms through their accounting bodies/unions to re-evaluate the principles that may sanitize the accounting procedures and circulate among directors who have been in the system

for longer periods and have advanced in terms of age. This is as a result of the fact that age of the directors significantly resulted to a rise in the earnings management. This will allow companies to have reliable and accurate financial reports that successfully convey financial records to stakeholders in a prompt and consistent way.

These annual reports provide a significant amount of earnings data that is used by other parties to make judgments about the company. Based on the study results, where meetings were held regularly led to significantly higher earnings management. The study also suggests that executive remuneration be less aggressively tied to performance in order to avoid inducing managers to falsify reported earnings in order to boost their income, as its influence on company performance is considered to be overestimated. Meetings are expected to be planned and focused towards addressing an issue of importance that cannot be handled at lower levels or by individuals. In this regard, the CMA need to lay out specific rules for how to incentivize managers including allowances that are based on merit, enforce their limitations on executive ownership of company stock and spelled-out procedures for trading between publicly traded firms and their affiliated businesses.

5.5 Limitations/delimitations of the study

The research took into account a few variables which may not be a true representation of board characteristics that influence earnings management. The data used was limited to the period between 2006 and 2015. A longer spread would give more accurate findings. Firms listed in the stock exchange may not give an accurate representation of all firms in Kenya as others are not listed hence not able to generalize the findings (Muthoni, 2014).

5.6 Areas for further study

The research has mainly established the relationship that exist between board diversity as the predictor variables and earnings management as the predicted variable for a period of ten years. Some of the board diversity factors have been utilized. However, there is need to estimate the relationship further utilizing firm characteristics like the firm age and even leverage of the firm to see if it influences actions of the directors and the reports they provide. Also, there is need for such studies across specific sectors and also another study comparing listed firms in different countries across Africa and especially EAC countries.

Future studies may examine how the diversity of executive and non-executive members on the board affects earnings management. As a result, this will improve and enrich corporate governance literature. Thus, in-depth interviews with directors, auditors, academics, executives (including CEOs and CFOs), and regulators may be conducted in subsequent studies.

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APPENDICES

Appendix 1: Introduction letter

To whom it may concern

My name is Rachael Wavinya Kiilu. I am pursuing a postgraduate degree, Masters in Business Management (Accounting Option) at the Moi University, Nairobi Campus, currently in my second year.

As part of the requirement, I am conducting a research on the impact of Board Diversity on earnings management of the firms listed at the Nairobi Stock Exchange.

The information obtained will be treated with confidentiality and will strictly be used for academic purpose only.

Your cooperation will be highly appreciated.

Yours Sincerely,

_____

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Researcher, 2018.

Appendix 2: Hausman Specification test (Without Moderating Variable)

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Experience				
D1.	147.8269	154.3885	-6.561593	110.5483
AgeDiversity				
D1.	349.8316	492.9399	-143.1082	104.1747
EducationD~y				
D1.	-68.10956	-149.8026	81.69305	91.49923
EthnicDive~y	-67.5771	-27.26493	-40.31217	157.0438
GenderDive~y	-333.3846	200.7234	-534.108	324.7784

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 5.42
Prob>chi2 = 0.3672

Appendix 3: Random Effects Model (Without Moderating Variable)

Random-effects GLS regression — Number of obs = 480
Group variable: compcode — Number of groups = 48

R-sq:
within = 0.3910
between = 0.7550
overall = 0.5284

Obs per group:
min = 10
avg = 10.0
max = 10

Wald chi2(5) = 13.87
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.0164

EarningsManagement	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BoardDiligence	108.3776	46.52016	2.33	0.020	17.19979	199.5555
GenderDiversity	341.1976	161.0057	2.12	0.034	25.6322	656.763
AgeDiversity	261.0921	107.9819	2.42	0.016	49.45144	472.7327
EthnicDiversity	-49.69691	88.09587	-0.56	0.573	-222.3616	122.9678
EducationDiversity	-253.8997	105.2812	-2.41	0.016	-460.247	-47.5524
_cons	-486.6257	590.9991	-0.82	0.410	-1644.963	671.7114
sigma_u	0					
sigma_e	3568.3744					
rho	0	(fraction of variance due to u_i)				