THE EFFECT OF BOARD DIVERSITY ON THE FINANCIAL PERFORMANCE OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree course in this or any other university.

Signature…… Date……...

Binti N'kuyala Mwallau

D61/74555/2014

This research project has been submitted for examination with my approval as a University Supervisor.

Signature…… Date……...

Dr. Josephat Lishenga

DEDICATION

This project is dedicated to my loving husband, Yussuf, who has supported and stood by me with patience as I spent many hours away from home. Special dedication to my beautiful mother Naila, who has been a rock of support to me and a truly phenomenal inspiration. To my son, Khalid Yussuf, the coolness of my eyes, my child. May God bless you for making me the happiest mother in the world.

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ABBREVIATIONS AND ACRONYMNS

ACCA: Association of Chartered Certified Accountants

BOD: Board of Directors

CPA: Certified Public Accountant

CPS: Certified Public Secretaries

ICPAK: Institute of Certified Public Accountants of Kenya

ICPSK: Institute of Certified Public Secretaries of Kenya

IT: Information Technology

KIM: Kenya Institute of Management

NEDs: Non-executive directors

NSE: Nairobi Securities Exchange

OECD: Organization for Economic Co-operation and Development

ROA: Return on Assets

ROE: Return on Equity

S&P 500: Standard & Poor's 500

ABSTRACT

In the recent past, board diversity and its relationship with financial performance has closely been monitored. Boards of directors are representatives of shareholders and are elected to make decisions on various important company issues. Since shareholder wealth maximization and welfare of stakeholders are the priority concerns for BODs, it is crucial that specific individuals are chosen from a diverse pool to represent their interests. The aim of this study was to establish whether board diversity has an effect on the financial performance of companies listed at the Nairobi Securities Exchange.58 companies were studied for the period between 2011 and 2015 using a causal and descriptive research design to study the various board diversity variables including: age of board members, gender, educational qualification, nationality and board member independence. Analysis of data was done using descriptive and inferential statistics. Correlation analysis findings show a positive relationship between ROA and age of board members, their nationality and independence, and a negative or rather insignificant relationship between ROA and gender and educational qualification of board members. Descriptive statistics indicate that women and non-Kenyan nationals are generally underrepresented on most boards, and that a majority of directors are highly educated, are non-executive, and above 45 years old. Of all the variables under study, educational qualification, nationality and age of directors were found to be relatively significant predictors of financial performance, while gender and independence were found to be insignificant predictors of ROA. Generally, it was established that the study's independent variables could explain only 4% of the variations of ROA within companies listed at the NSE. The following are the recommendations from the study: the listed companies should consider electing independent, non-Kenyan nationals, and members above 45 years old since these have been shown to have a positive correlation with ROA. However, it is generally recommended to have younger members on boards in the wake of the technological era- in order to maximize shareholder wealth. The concept of gender diversity is inconclusive and more research on this area is recommended.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

In an ever-changing world, being close-minded and having homogenous thinking can be a quick route to irrelevance, especially when it comes to business. The world has seen a push to increase diversity in terms of representation - whether in entertainment, politics, or business. Diversity means having various groups represented so as to have varied ideas and voices, and inclusion means valuing those voices and giving room to those ideas. It is also important to note that the definition of diversity keeps changing. Recently, the Institute of Corporate Directors defined diversity as including "age, ethnicity/ nationality, gender, personal skills, business experience, functional experience, stakeholder perspectives and geographic background", with all factors being important.

The primary purpose of diversifying boards is to create a wide range of boardroom features which then enables the boards to deliberate with greater perspective. During the last few decades, the subject of board composition has received increased attention. The BOD plays an important role in the strategy, oversight and control of an organization, and is therefore regarded as a strategic organ in every business.

The rise in number of corporate scandals and financial crisis has created huge concerns over the governance of companies and their duties to stakeholders. The importance of diversifying boards has been emphasized by regulators and academics. The recent concentration on the diversity agenda has been as a result of the low number of female and young members on boards, which is a discussion worth having the world over, and particularly in Kenya. Global research has shown a positive relationship between board diversity and innovation, business performance and better corporate governance thus, it's importance in researching the diversity and inclusion in boards.

1.1.1. Board Diversity

Diversity is a manifestation of values of liberty, equality and justice. Diversity, however, in the context of corporate governance, is analyzed as a route to a different end, such as higher customer satisfaction, higher employee morale and productivity, or improved shareholder value (Shin and Gulati, 2011). The main argument here is that the more diverse a board is, the better the signals that are sent to stakeholders, for example, if a board is considered gender diverse, risk-averse stakeholders would be interested simply because this specific type of diversity sends a message of risk aversion due to the nature and style of leadership associated with women.

Over the past few decades, people have questioned the relevance of gender of board members, since liability standards and conduct are similar for all directors across the board, irrespective of their diversity characteristics. Such a question would not arise in a perfect world. Langevoort (2010) suggests that board diversity would occur when talent and skill are uniformly distributed between the two genders. In this imperfect world, however, there is a long history of inequality of opportunities and gender discrimination. From a social justice perspective, it is safe to say that the topic of gender diversity really is relevant.

The major components of board diversity include: board age diversity, gender diversity, board independence, professional experience, educational qualification, ethnic diversity/ nationality, etc. Recently, there has been a push to diversify boards of directors. However, despite numerous efforts and research in many countries promoting diversity, e.g. in female participation, research recently done by the OECD concluded that the number of ladies on boards is still very low at most management positions (OECD, 2012).

Women are considered to be more risk averse in investing both their own assets and investing on others' behalf, they are conscientious in performing their tasks, and oriented more towards others. In tough economic conditions, or as insolvency approaches, the above-mentioned perceptions become really important to risk-averse stakeholders, and will most likely engage better and invest where more women are sitting on the board.

Age diversity, on the other hand, refers to representation from across various age groups, and does not necessarily imply or mean adding youth to a board for the sake of being diverse, nor does it mean having a board comprised entirely of young directors. People coming from various age groups tend to bring different perspectives and experiences to work. Previous research has suggested that that most directors are aged between sixty and seventy; that a considerable number are within their seventies and eighties; and very few board members are aged below 40. Traditionally, most directors are experienced, mature, and, in most cases, fill the role near the later part of their careers or after retirement.

Though the perspective these mature and old directors bring to the boardrooms is vitally important, it is important to note that age diversity helps firms to benefit from the different perspectives that various age groups have. Board age diversity encourages board learning and development, and fosters creativity and innovation, and numerous studies have established positive relationships between age diversity and performance of firms.

Board diversity is generally critical on the financial performance of companies, and in this case, companies listed at the NSE. The aspects of financial performance are discussed in detail, below.

1.1.2 Financial Performance

In terms of output, financial performance is the accomplishment of quantified objectives. Company performance is considered a multidimensional hypothesis that comprises four major components including: human resource execution which includes fulfillment of employees; profitability of a company, for example, levels of innovation; client based performance, such as consumer loyalty; financial and economic performance, including

market position, revenues, returns, earnings per share, etc. The main focus of this research is on measures which are crucial for the fulfilment of objectives of companies listed at the NSE. Thus, it has computed financial performance by focusing mainly on output: Return on Assets (ROA) or Return on Equity (ROE).

ROA is an indicative measure of net profit that a company earns in relation to its total assets or resources. Simply put, ROA=Net income/average total assets in book value. This ratio measures how effectively a company can earn income or return on its investment in assets. The higher the ROA ratio, the better for investors because it signals to them that the company is more effectively managing its assets to produce greater amounts of net income. Also, a positive ROA is indicative of upward profit trends. This ratio is relevant and most useful when comparing firms in the same industries for the sole reason that different industries usually use their assets differently. A good example is that mining and construction companies employ large, cost-intensive equipment while IT companies use servers and computers.

ROE calculates the net income returned from the equity of shareholders. ROE is an indicative measure of the profitability of companies by showing the profits generated using the shareholders' fund contributions. The higher the ROE, the better for investors, since it signifies that the firm is efficiently using the funds contributed by shareholders.

1.1.3 Board Diversity and Financial Performance

Research suggests that board diversity improves the performance of companies due to the many benefits that come with diversified boards. Some of these benefits include: effective and constructive decision making; better and economic utilization of the diverse talented people; and improvement of investor relations and company reputation by portraying the firm as a citizen that is absolutely responsible.

Allen, Gail and Wheatley (2008) and Marimuthu (2008) believe that diversity results in positive company performance. Prihatiningtias (2012) used Tobin's Q and ROA in measuring financial performance of firms, and discovered that gender diversity had both affirmative and adverse effects on a firm's financial execution. Schwizer et, al. (2012),

however, holds a contrary view. They studied Italian boards between 2006 and 2008 and discovered that there was no statistical relationship between financial performance and having female directors sitting on boards.

Though there have been studies on the relationships between board diversity, mixed results have been found. This is the reason that necessitates further research on this area, specifically on companies listed at the NSE, where until recently, very little research efforts have been put in studying these relationships.

1.1.4 Companies Listed at the Nairobi Securities Exchange

Kenya has seen NSE listed companies working to attract, retain and develop more women and youth into senior corporate positions. From the 2017 board diversity report of Kenyan listed companies launched by the Kenya Institute of Management (KIM) and other partners, it was observed that gender diversity when female representation is at least 25%, has a positive impact/ influence on the firms' compounded annual growth rate of revenues and assets. The report also shows that Barclays Bank of Kenya board makes the most gender diverse of any listed firm in Kenya, because it has a 50% gender representation. Generally, the listed companies are slowly but increasingly creating diverse boards over time.

1.2 Research Problem

Despite tireless attempts in most jurisdictions to enhance female and young members' participation, a study recently done by the OECD showed that the numbers of women are still very low at most levels of management (OECD, 2012). Similar results were found by the research done by KIM (KIM, 2017). In Kenya, it is only recent that the development of diversity in terms of age and gender has started gaining momentum.

The world has altogether criticized companies for the small numbers of women and young members on boards. Though a number of researches have shown positive correlations between board composition and firm performance, it is important to note that previous studies on board composition concentrated mostly on potential advantage of replacing inside directors with outsiders and independence of directors, with the impact

of nationality, age and gender diversity in decision making only gaining momentum and recognition in the past few years, and research in Kenya on this matter has not been as comprehensive as it can potentially be.

Mutua (2007) studied the relationship between board diversity and financial performance of insurance underwriters in Kenya and basically focused on the insurance sector only. Vivian (2016) looked at the effects of board diversity on financial performance of commercial banks in Kenya. Ageda (2015) did a study on the effect of board diversity on the financial performance of trading and manufacturing companies listed in the NSE. Though many studies have been done, most of them have limitations in terms of the sectors covered in the study, the type of diversity studied, etc. This study seeks to answer the question: what are the effects of board diversity on the financial performance of companies listed at the NSE?

1.3 Research Objective

To study the effect of board diversity on the financial performance of companies listed at the NSE.

1.4 Value of the Study

The study will be used in the formulation of company policies relating to diversity within their boards. This is especially important because the more diverse a board is, the better its performance and corporate governance is expected to be. This in the long run, ensures that stakeholders' interests are met, and that the reputation of the company is upheld and maintained. The study will thus enhance knowledge on the diversity of board members in Kenya in terms of age, nationality, independence, gender and educational qualification and the effect this has on financial performance. This will in practice assist decision makers and also committees tasked with nominating directors, in determining the right fit of board members for their companies based on the firm's specific needs and targets.

Investors will benefit immensely from the study in the sense that they can tell about potentially poor or great financial performance of a company simply by looking at how diverse the board is in terms of age, gender, nationality, independence, educational

qualification, etc. For example, long-term, risk averse investors will be drawn to companies which have a number of women on their boards solely because of the signals that this board composition sends: women on the boards would mean that investments taken by the board will be skewed towards the risk-averse side, where risks are low as preferred by the risk-averse investors.

The board will become better informed of how its activities (resulting from board composition), affect shareholders' value and returns, while academicians will benefit from the study in the sense that they will have access to the results of this study which will form a basis for further study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Functions of the BOD have traditionally and principally been explained by the agency theory. Agency problem results from the separation of ownership and control, as owners transfer the duty of controlling the company to managers, also known as agents (Clarke, 2004; Letza et al., 2004). Agency problems, created as a result of absence of direct control, is concerned mainly on how owners can prevent managers from maximizing their own selfish desires, and instead focus on maximizing wealth for the owners. Berle and Means (1938), Coffey and Wang (1998) and Fama and Jensen (1983) insist that owners will mostly rely on boards to curb agent opportunism and protect their interests. In addition, boards are tasked with the job of reducing conflicts of self-interest, to actively monitor agents' behavior, and ensure that the agreed upon executive functions are carried out.

Many critics have questioned the main impact and duty of a board, despite the fact that management theories have over-emphasized the importance of these boards (Coffey and Wang, 1998). One of the worries if that sooner rather than later, these boards might give away control to management groups who will most likely work to satisfy their own selfish desires and interests. Recent scandals are a clear example of how boards are failing to be accountable to all the concerned stakeholders (Coffey & Wang, 1998). Research has shown that diversified boards could be a solution to these problems.

2.2 Theoretical Review

Agency theory is the most often applied theoretical framework used to study the correlation between composition of a board and performance of firms (Lynall et al., 2003). Earlier research focused mainly on independence of boards, but later research added other characteristics including board diversity or board size.

Various corporate governance theories, other than the agency theory, are used to explain why boards should be diversified and to support changes in regulation. Good examples are stakeholder theory and resource dependence theory both of which provide additional

perspectives relating to the role of a board. Researchers have recently suggested use of a multi theoretical framework, mainly because there is no single theory which can fully explain the relationship between company performance and board diversity (Lynall et al., 2003). While it is clear that there is no single theory which could exhaustively explain the correlation between board diversity and financial performance of a company, this project details a number of theories below, borrowed from various fields including: economics, organization theory, etc. (Carter, et al 2010).

2.2.1. Agency Theory

Berle and Means (1938) were concerned that with the passing of time, managers might dominate boards, the result of which would be rendering the monitoring role ineffective. Various authors and researchers have suggested the diversity of board as a solution to reducing agency costs. For example, Coffey & Wang (1998) argue that diversity of boards usually plays a crucial role in ensuring that boards meet their objectives and fulfil their accountability to shareholders. Fama and Jensen (1983) found that in order for a company to efficiently monitor its managers and balance a board's interests, it was imperative that the company includes independent directors in its boards. This would enhance the value of the firm.

Bonazzi and Islam (2007) also feel that independent directors are better at monitoring managers and protecting shareholders' interests. Seemingly, researchers who base their work on the agency theory mostly focus on the roles of external board members when they make reference to board diversity, and consequently assume other characteristics for example age, nationality and gender which would usually show a positive performance impact.

2.2.2 Resource Dependence Theory

The resource dependence theory was presented by Pfeffer and Salancik in the year 1978. In this theory, companies are viewed majorly as open systems which depend on contingencies in their external environment (Hillman et al., 2009). The resource dependence theory views board members as providers of intangible as well as tangible

assets which are fundamental for the performance of firms and that shape their behavior and environment.

According to the theory, the BOD is regarded as a means by which external dependency can be managed, uncertainty in external environment reduced, as well as reduce transaction costs that are linked to environmental interdependency mainly through linking companies with their external environments (Lynall et al., 2003, p.418). The theory, as opposed to the agency theory, provides a more appropriate theoretical framework which can be used study the correlation between board diversity and performance of a firm (Carter et al., 2010). According to the theory, there are four major benefits that accrue to a firm as a result of having a board: i) the board provides resources including expertise and useful information; ii) the board creates communication channels with constituents of importance of the company; iii) there is unparalleled provision of commitment of support from important organizations found in the external environment; and iv) the external environment sees a company with a board as a legitimate entity, thus creating and increasing the firm's value. One of the important concepts of the theory is on the valuable linkages and resources that directors bring to a board. Hillman et al., (2009), suggest the reconstitution of board members over time, whenever a company needs change.

Age diverse boards are have also been suggested as a means of enhancing board performance, mainly because members of varying ages bring on board different skills, experiences and backgrounds. Since diverse boards have been associated with bringing on board new skills, resources, and knowledge, it has been established that decision making of these boards significantly improves because diverse members will most likely tackle problems in different ways and offer better solutions, as opposed to homogeneous boards, (Ferreira 2010).

Ferreira (2010) goes on to argue that different perspectives and creativity are some of the most important benefits of having diverse boards, because diverse members tend to have lower degrees of group thinking. Similarly, Campbell and Mínguez-Vera (2008) note that diverse boards give companies a broader range of knowledge and they tend to analyze decisions more thoroughly than homogeneous groups.

One of the benefits of more diverse BODs is that varying age groups have broader access to expertise and information. The younger generations today are possibly more tech-savvy, better informed and more experienced when it comes to online businesses, mainly as a result of the exposure that they have by growing up in the era of laptops, internet and various social media platforms. The older generation are generally better in handling paper work since they have not had as much experience of online business, as the younger generation has. These benefits of diversity greatly contribute to the financial performance of companies.

2.2.3. Stakeholder Theory

It is undeniable that most corporate governance theories usually emphasize on protecting shareholders' interests and ultimately ignore/ assume the huge importance of other stakeholders. The stakeholder theory suggests that stakeholders are important as well, and their interests should be safeguarded just the same as would be done for shareholders (Freeman & Evan, 1988).

In order to safeguard the interests of stakeholders, it is paramount that the BOD is diverse, since this will enable the members to protect and respond better to the needs of the stakeholders. Johnson and Greening (1999) make it clear that in order for the company to acquire new information on the ever-changing demands, tastes and preferences of external stakeholders, it is expected that we have board members who will represent the firm's stakeholder groups. This results in increased firm value, maximization of shareholders' wealth, and improved financial performance.

2.2.4 Human Capital and Social Capital Theories

Human capital theory explains the impact and effect that a person's education, skills, and experience can have on the firm that they are influencing. Carter et al., (2010) suggest that it is only by having diverse and unique human capital that diversity will affect board performance. The effect on performance of a company can generally be positive or negative. The importance of one's human capital could dependent on a firm's environment (ibid.).

Social capital is formed when organizations and individuals interact with each other (Singh, 2007). An extensive network with many unconnected areas will improve accessibility of diverse and more information (ibid.). Human capital will affect the expertise of a board which consequently affects the performance of a board, and social capital will affect board linkages which eventually affects the performance of a board as well (ibid.). Murphy and McIntyre, (2007) conclude by establishing that the diversity of a board will ultimately affect performance of the company. Age diversity positively affects board performance by expanding human capital. Long careers for older people could mean more experience, and thus a greater board age diversity that has a high average age, may not be as beneficial.

2.2.5 Social Psychological Theory

Social psychology theory rests on the belief that the more diverse a group is, the less likely it is to get influenced by the groupthink factor. This is simply because diverse members can prevent directors with majority status from creating and exerting a lot of unfair influence in group decisions (Carter et al. 2010). On the opposite end, however, some researchers have suggested that diversity may result in hindered communication and less group cohesion as a result of increased conflict. Decision-making then takes a lot of time, becomes less accurate and ineffective. Nonetheless, research has suggested time and again, that the more diverse a group is, the more the creation of impactful decisions and innovations.

Kim, Burns, and Prescott (2009) established that board diversity has a positive relationship with the intensity and speed of implementing the strategic team's action points and targets. Diversity positively influences how people reason and think by enabling members to critically consider options and scrutinize existing information, and come to valuable conclusions. Diversity brings about cognitive friction which allows board members to question existing lines of thought, experience improved error detection, and to avoid speculative behavior. It is then safe to say that better financial results are expected from companies with diverse boards, where more independent, age

and gender diverse ones benefit from improved cognitive performance than homogeneous boards.

2.3 Determinants of Financial Performance of Listed Companies

Financial performance of firms is a target measure of monetary 'health' or wellbeing over a specific period of time and it can be used to study comparative firms in a similar sector/ industry. Some of the determinants of financial performance include:

2.3.1 Capital Structure

Capital structure is simply how a company's operations and growth are financed through various sources of funds including debt (both long-term and short-term) and equity (including common and preferred stock, retained earnings, etc.). The appropriate mix of these two directly affects company performance. The capital structure/ financing decision is therefore a crucial decision since it influences both the risk and return for shareholders.

More debt levels is associated with better firm execution mainly through decrease of operational expenses and inefficiencies. Though debt is a mechanism used to improve work ethics and administrative performance, an unchecked increase in debt could lead to higher levels of financial distress. It is because of this reason that listed companies ensure that they maintain an appropriate mix of debt and equity, which enhances financial performance, and avoids the cost bankruptcy, loss of jobs, bad reputation, etc.

2.3.2 Firm Size

The size of a company has been shown to influence performance. Some of the main elements of large firms include their great capacities to exploit economies of scale and formalization of methods. These qualities make execution of operations and processes more successful, which in turn results to better performance for the larger firms. One of the standard measures of the size of firms is the number of employees.

This study is focused on firm size and its effects on profitability. The hypothetical propositions for this are around the idea of economies of scale where big firms are able to get discounted rates when they make huge purchases, they can also divide high fixed

expenses over the several critical units, etc. It is therefore expected that there will be a positive correlation between benefits and firm size. However, there are also studies which have shown negative relationships between size of a company and its profitability. The possible reason for this adverse relationship is that large companies are run by managers who focus on maximizing their own wealth instead of the shareholders'.

2.3.3 Macroeconomic Variables

Given the financial and economic integration in today's world, no single firm can claim to be unaffected by what is happening on the international economic field. Macroeconomic variables here include rates of inflation, political risk, interest rates, etc. which have a direct impact on a firm's performance. Generally, the industry in which a company exists has a great effect on its financial performance.

Many studies have revealed that the effect of macroeconomic factors on company performance shows a general rise in exchange rates, inflation, share prices, money supply and financing costs over certain periods. Kipngetich (2011) in his study of the relationship between financial performance and financing costs, established that there is a positive correlation between financial performance of commercial banks in Kenya and financing costs.

2.4 Empirical Studies and Research Gaps

Many studies have been conducted on the effect of board diversity on the performance of companies. This study however, specifically focused on the effect of board diversity on the financial performance of companies listed at the NSE. Minguez-Vera & Campbell (2008) from Spain, found that board gender diversity has a positive effect on firm performance. The study however eliminated from its sample some financial firms and focused on companies listed on Madrid's continuous market only, and failed to consider all firms in Spain.

Australian authors, on the other hand, have established that firm value is positively related to gender diversity. These studies included expansive firms on the Australian stock trade from 2000 to 2001. In as much as different studies from various nations have

set up a positive effect of board gender diversity on company performance, regardless others set up negative effect. This obviously indicates how uncertain the idea of gender diversity is. For example, (Bohren and Strom 2007) established a negative connection between gender diversity and firm performance for the Norwegian firms. This is in clear complexity to different examinations in Scandinavian nations which found no relationship by any stretch of the imagination (Randoy et al. 2006). Randoy et al. (2006) while undertaking an examination in the Nordic nations of Denmark, Norway and Sweden, found that gender diversity in corporates does not have any impact on the performance of the organizations. They gauged performance by Return on Assets.

Both Kochan et al. (2003) and Shrader et al. (1997), studying US firms, found no relationship between gender diversity and firm performance/ firm value. These results are however very different from studies of (Carter et al. 2010); Catalyst, (2004); and (Erhardt et al. 2003), which established a positive relationship between performance and gender diversity.

Annalisa Barrett in 2017, examined companies in the Standard & Poor's 500 (S&P 500) with the purpose of studying age diversity and found low levels of dispersion in board members' average age. She established that the average age of all boards was 62.4; that boards in the Information Technology industry have the most age diverse boards (standard deviation of 8.1 years); and companies publicly-trading for years above 50 have the least age diverse boards (SD of 6.5 years, as opposed to the index average of 7.2 years).

A 2017 report of KIM authored by Samuel Njihia concluded that gender diversity is likely to have the greatest impact on firms' financial performance compared to other diversity variables. It also noted that the global average entry age into the boardroom was 50 years, and that females board members enter at 48 years while their male counterparts waited until they were 52 years.

Rajula (2016), studying commercial banks in Kenya, found a positive relationship between board diversity and financial performance. This study was however limited to commercial banks only.

2.5 Conceptual Framework

This conceptual framework gives an informative schematic relationship between the study variables. The independent variable in the study is board diversity, measured by age, gender, nationality, board independence and educational qualification. The dependent variable for this study is financial performance, measured by ROA. The control variable is firm size.

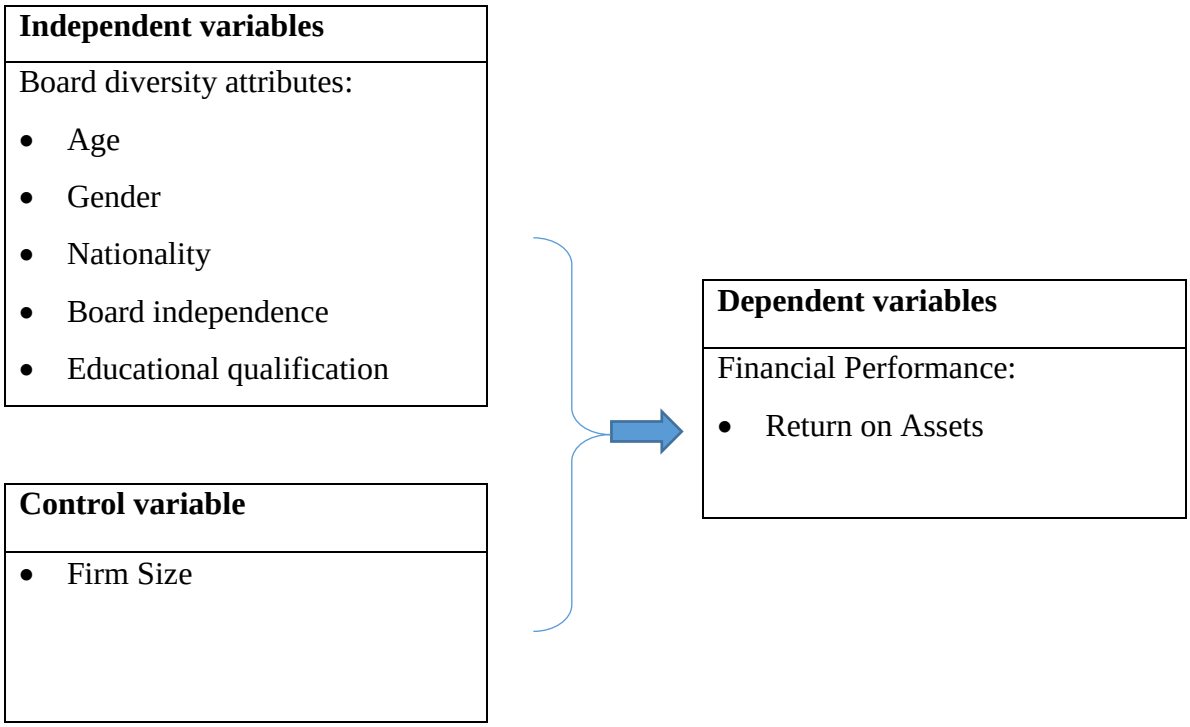

Figure 2.5: Conceptual framework

2.6 Summary of Literature Review and Gaps

Though there has been an impressive amount of research done on the correlation between board diversity and firm financial performance, there have been mixed results from the literature that currently exists. Most of the studies have found positive linkages, some find no relationship or even negative relationships between financial performance and board diversity. The increased relevance of topics on corporate governance coupled with the inconclusive nature of the evidence presented so far, beckons for additional research to be done.

Additionally, companies have been required to choose board members with diverse gender and ethnic backgrounds and age differences by stockholder activists, institutional monetary investors, and other concerned parties. The main reason for this, as has been explained above, is to improve company performance and promote equality, diversity and inclusion.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The methods used in undertaking this research are discussed under this section, including: the research design, the data collection method, and how data is to be analyzed.

3.2 Research Design

Research design can be defined as the plan that a researcher uses when conducting the research including collection and data analysis. It explains how the researcher will conduct the collection, analysis and measurement of data and defines what and how the researcher will conduct the study.

This study used a causal research design in an effort to study the effects of board diversity on financial performance of companies listed at the NSE. The research is also considered descriptive/ explanatory in nature as it describes the variables of board diversity within boards of companies listed at the NSE, in relation to financial performance. This design gives the researcher a better understanding of the subject matter, provides solutions to the study questions and curves out areas for further studies. The study has analyzed the effect of board diversity on financial performance, over a 5 year period from 2011 to 2015.

3.3 Population of the Study

Population is the whole group of individuals under study and they have common characteristics. The population that will take part in the data collection is the target population Mugenda & Mugenda, (2003). The target population for this study included all the companies listed at the NSE - from various sectors.

3.4 Data Description and Collection

The data for this project was obtained mainly from secondary sources since the listed companies have easily accessible and publicly available financial statements and annual reports. This saved on both money and time. Secondary sources such as the NSE Handbook (2009) and audited annual reports, were used to calculate the ROAs as well as obtain information on the age, nationality, gender, board member independence and educational qualifications of the listed companies' directors.

3.5 Data Analysis

Data was collected, cleaned, validated and edited so as to ensure accuracy, completeness and consistency. The data was also summarized in the form of charts and tables which enabled easy analysis and drawing of conclusions. Descriptive statistics were also used and these provided more information as to the distribution of the independent and dependent variables around the mean and standard deviations thereof.

Regression analysis and correlation analyses were also employed. Regression was meant to establish the relationship between the following variables: age, gender, educational qualification, nationality, independence with company performance; while correlation gave insights as to the strength and direction of the association within the independent variables and between the dependent and independent variable.

The multiple linear regression model employed was as follows:

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \beta 5\ X5 + \varepsilon$$

Where: Y = Financial performance, measured by ROA which is computed as net income divided by the average total assets in book value

$\beta 0$ = constant or Y-intercept which defines value of ROA

$\beta 1, \beta 2, \beta 3\ \beta 4, \beta 5$ = regression coefficients for the independent variables

X1 = Age of board members (% of directors above 45 years);

X2 = Gender of board members (% of female directors);

X3 = Nationality of board members (% of Non-Kenyan nationals);

X4 = Board independence (% of Non-executive/ outside/ independent directors);

X5 = Education level of board members (% of directors with degrees)

ε = Random error term

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The two types of data analysis covered in this chapter include: descriptive analysis and inferential analysis. Descriptive statistics are generally brief descriptive coefficients which have in this study summarized the board diversity variables and financial performance data. These descriptive statistics have been divided into measures of central tendency and measures of variability, and these are important mainly because they provide comprehensive information about each variable. Inferential analysis on the other hand, has leveraged on the following statistics: regression analysis and the Pearson correlation.

Pearson correlation usually measures the degree of association or correlation between variables. It shows the degree to which any two given variables are related but does not fit a line through data points. Pearson correlation computes a correlation coefficient (r) which informs us how much one variable tends to change when the other one does. There is no relationship when r is 0.0. When the coefficient r is positive, the trend is that one variable goes up as the other one goes up. When r is shown as negative, then there is a trend that as one variable goes up, the other one goes down. Linear regression, unlike Pearson correlation, finds the best line that predicts Y from X.

4.2 Descriptive Statistics

The analysis of descriptive statistics in this study gave important insights into the data. Table 4.2 shows the various descriptive statistics of the board composition variables and ROA (a measure of financial performance).

Table 4.2: Board Diversity and Financial Performance of Listed Companies

Variable	Mean	Median	Min	Max	Standard deviation	Asymmetry	Kurtosis
Gender (females)	18.42%	18.47%	0.00%	50.00%	12.66%	0.27	0.07
Nationality (non-Kenyans)	27.32%	22.65%	0.00%	80.00%	22.93%	0.42	-1.02
Independence (NEDs)	78.02%	81.82%	25.00%	100.00%	14.36%	-1.34	2.77
Educational qualification	96.66%	100.00%	66.67%	100.00%	8.59%	-2.78	7.26
Age (45 & above)	77.76%	82.58%	0.00%	100.00%	20.96%	-2.35	7.74
ROA	-0.53	0.04	-33.18	0.24	4.36	-7.61	57.91

Source: *Research Findings*

Table 4.2 shows the various descriptive statistics of the variables under study: gender of board members, their nationality, independence, educational qualification, age of the directors and the ROA.

The findings show that out of 58 listed companies, boards are underrepresented in terms of foreign and female board members – with mean values being below 50%. However, most board members are more than 45 years old, with degrees in various fields of study and a majority of them are non-executive directors. The standard deviations for each of the variables shows that the above values are not significantly dispersed from the mean values.

From skewness, the study observed that gender and nationality are positively skewed which implies that only a few companies have ladies and NEDs above the mean, that is, most of the companies listed at the NSE have more ladies and NEDs below the respective means of 18.42% and 27.32%. On the other hand, independence, educational qualification, age and ROA are negatively skewed which implies that most of the variables are above the mean, that is, most of the directors in all the listed boards are non-

executive, have degrees and other educational qualifications and most are aged 45 years and above. All the variables are asymmetrical. However, gender and nationality variables are relatively close to zero/ relatively symmetrical, which means that the number of ladies and NEDs in the listed companies are around the modal number.

Kurtosis values indicated that some of the variables are leptokurtic while others are platykurtic. Gender distribution is however close to normal and relatively close to being a mesokurtic distribution. Positive kurtosis shows a relatively peaked distribution. Negative kurtosis shows a relatively flat distribution. Lastly, normal distributions result in a kurtosis statistic of roughly zero. Leptokurtic refers to a statistical distribution where points are clustered along the X-axis therefore resulting in a higher kurtosis or higher peak, as compared to the curvature in a mesokurtic/ normal distribution. The high peakedness and fat tails are an indication that the distribution is more clustered around the mean than in a platykurtic or normal distribution and that the distribution has in relative terms, a smaller standard deviation.

When kurtosis value is a large positive, then a distribution is said to be leptokurtic. On the other hand, platykurtic distribution refers to a statistical distribution where the X-axis has extremely dispersed points. Thinner tails therefore result from a platykurtic distribution as compared to a normal distribution. Since platykurtic distribution has thin tails, it is seen to be less clustered around the mean than are normal/ mesokurtic and leptokurtic distributions. Where a distribution has more data in its tails and comparatively less data in its peak, the excess kurtosis value is negative and the distribution deemed to be platykurtic.

4.2.1 Gender of Board Members

As shown in table 4.2 and figure 4.2.1, only 18.42% of the board members from a total of 58 companies, are women. The majority of board members are male, though the number of women is slowly increasing over the years.

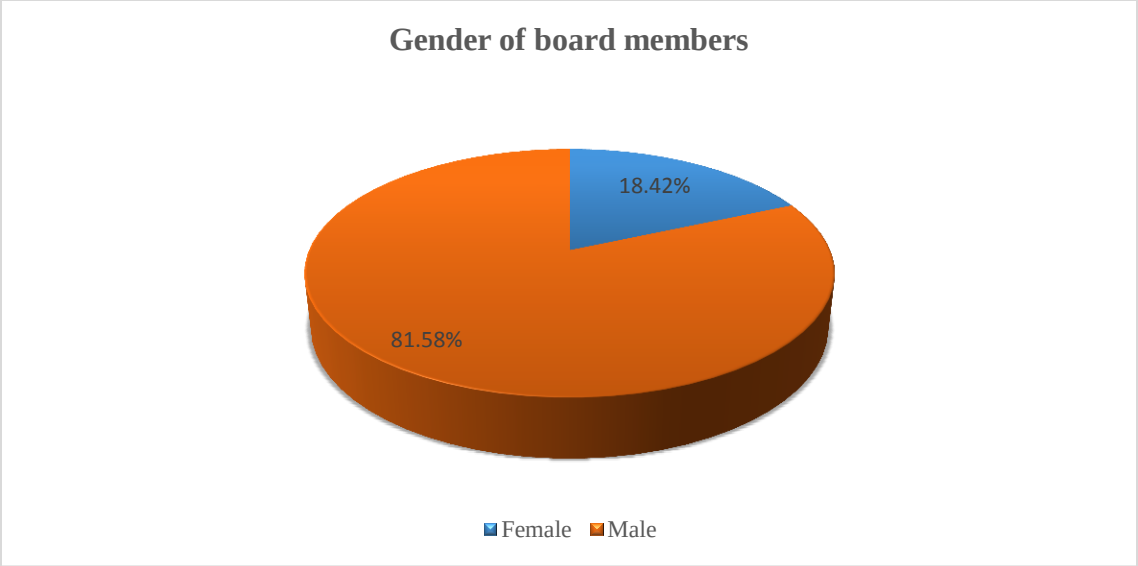

Figure 4.2.1: Percentage of male and female directors

4.2.2 Nationality of Board Members

Out of the 58 companies that were studied, only 27.32% of the board members were Non-Kenyan nationals. The majority of the members were Kenyan nationals/ citizens.

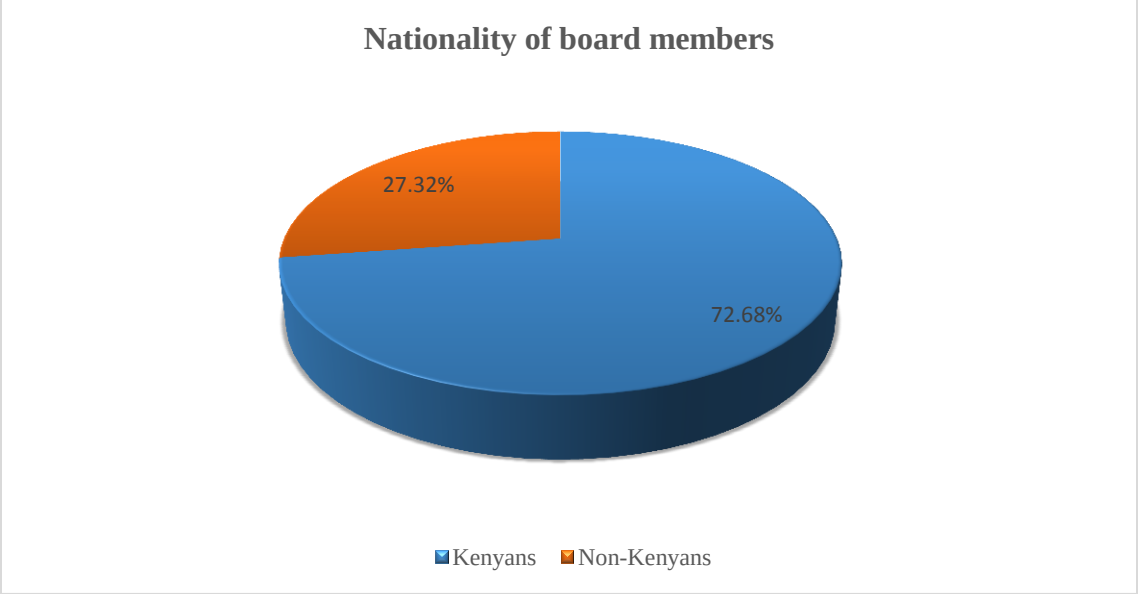

Figure 4.2.2: Percentage of Kenyan & non-Kenyan directors

4.2.3 Independence of Board Members

78.02% of the members sitting on the listed companies' boards, are non-executive directors. More than three quarters of these NEDs are independent directors. Only 21.98% of the directors are executive directors.

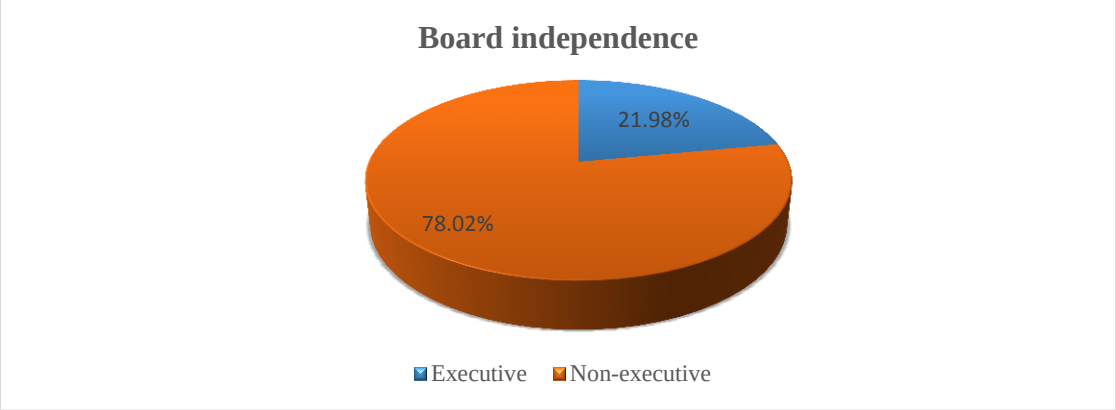

Figure 4.2.3: Percentage of NEDs and executive directors

4.2.4 Educational Qualification of Board Members

96.66% of board members are degree holders who also have other qualifications in different fields, for example most of them are ACCA, CPA, CPS qualified, etc. and are registered under various professional bodies such as ICPAK, ICPSK, Institute of Directors in Kenya, etc.

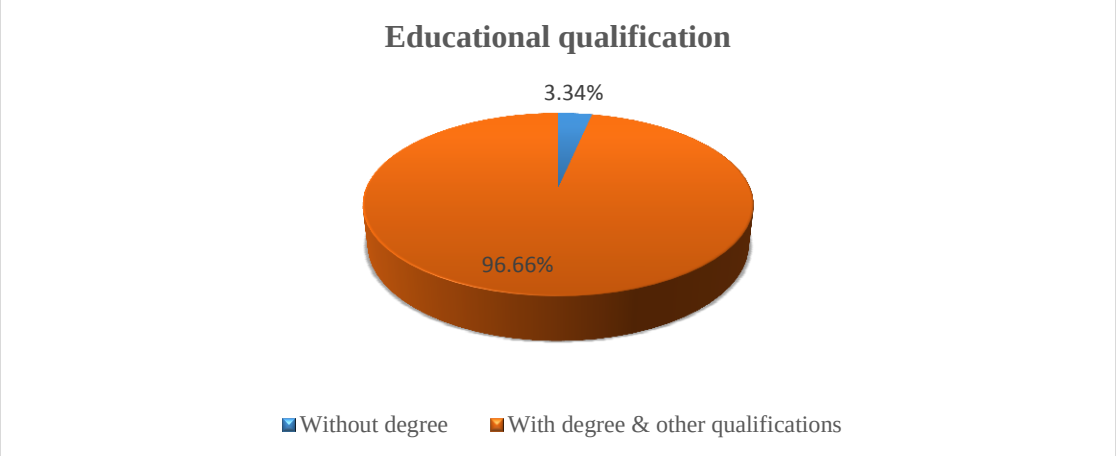

Figure 4.2.4: Educational qualification of directors

4.2.5 Age of Board Members

It was clear from the study that more effort is to be put in the nomination of young directors aged below 45 years. A majority of 77.76% were aged 45 years and above, and most of these people are specifically above 50 years old. Only 22.24% are below 45 years, which shows that most companies have more confidence in appointing older directors as opposed to younger ones.

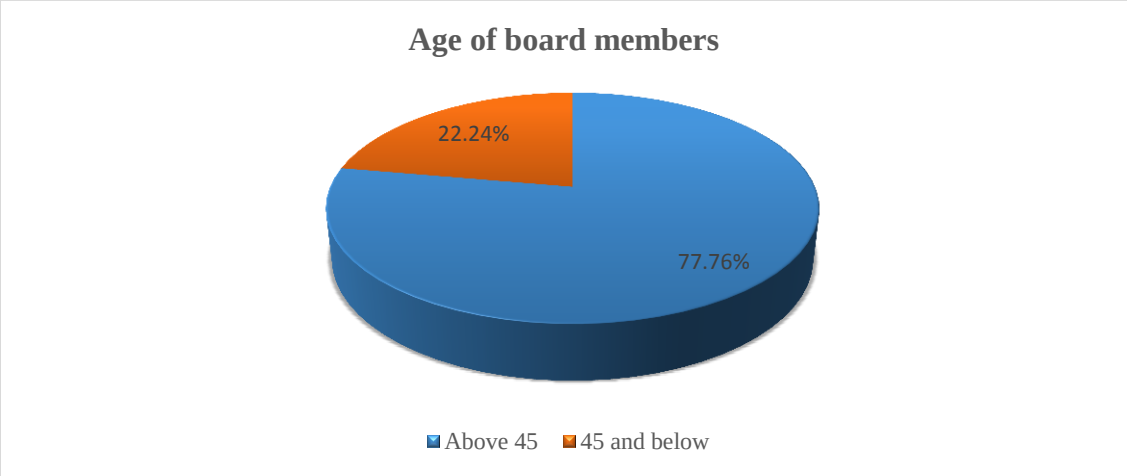

Figure 4.2.5: Percentage of directors above & below 45 years

4.3 Correlation Analysis

This study determined the unique correlation between the independent variables (board diversity variables) and the financial performance indicator (ROA). In order to determine the degree of association within independent variables and between the dependent and independent variables, we used correlation analysis where we estimated the Pearson Product Moment correlation coefficient ("r"). This r co-efficient ranges between -1 and +1 and quantifies the strength and direction of the linear association between two variables. The correlation between any two variables can be said to be positive (i.e., higher levels of a given variable are associated with higher levels of the other) or the correlation can be negative (i.e., higher levels of a given variable are associated with lower levels of the other). Notably, the sign of the correlation coefficient usually

indicates the direction of the association while the strength of the association is indicated by the magnitude of the correlation coefficient.

From the analysis of the correlations, it was gathered that each independent board composition variable has its own unique informative value in the ability to explain ROA/ financial performance (Table 4.3).

Table 4.3 Correlation Coefficients of Board Diversity Variables and Financial Performance Indicator

	Gender (% of females)	**Nationality (% of non-Kenyans)**	**Independence (% of NEDs)**	**% of degree holders**	**Age (% above 45yrs old)**	**Average ROA**
Gender (% of females)	1					
Nationality (% of non-Kenyans)	-0.23934	1				
Independence (% of NEDs)	0.27427	-0.41328	1			
Educational qualification	-0.22628	-0.01102	0.26468	1		
Age (% above 45yrs)	-0.16108	-0.19354	0.34711	-0.13676	1	
Average ROA	-0.01369	0.04936	0.17573	-0.15940	0.13293	1

Source: *Research Findings*

Table 4.3 shows the correlations between independent variables: gender of board members, nationality, independence, educational qualification, age, as well as correlation with the financial performance indicator which is the ROA. 95% level of confidence was employed in computing the significance of the coefficients.

Though in a very small magnitude, gender is negatively correlated with ROA, that is where women are more on boards, the ROA is lower. Same case goes for educational qualification, where the larger the number of degree holders on a board, the lower the ROA. However from the weak magnitudes of the negative correlations of both gender and educational qualification, it is clear that educational qualification has a higher negative impact on ROA as compared to gender. Put differently, it is safe to say from the results that gender and educational qualification have insignificant contribution towards ROA.

The Pearson correlation coefficients relating to age, nationality and independence indicate that these variables are statistically significant to the companies' ROA as indicated by the positive and weak/ medium coefficients. Nationality has the weakest positive Pearson correlation coefficient, followed by age and then board independence. This implies that board independence is most likely to positively influence company performance/ ROA, followed by age and lastly nationality. This is to say that the nationality of a board member will have a positive effect on a company's ROA, but only by a small extent. Broadly speaking, where a board member comes from is critical because it implies that different cultures are represented on boards, new cross border ideas and new ways of approaching problems and providing solutions are available.

Age is a positive influencer of ROA in the sense that a good balance between the young and the old generations is expected to contribute different ideas and bring the energetic and digital perspective to the board, mixed with long-acquired and perfected skills and experience. Board independence is relatively the best influencer of ROA, according to table 4.3. It is therefore inferred that having more independent non-executive board members is beneficial for financial performance of a company as measured by ROA. This is in line with what is expected from NEDs who are usually cherry picked for their

personal qualities, experience and specialist knowledge. NEDs ensure that executive directors follow through on the company's strategic decisions and the NEDs also prioritize the interests of stakeholders, such as employees, clients, shareholders and society in general. NEDs also have a mentoring role to advise and guide Chairmen and Chief Executives where issues arise, or prior to them being brought up in board meetings.

4.4 Regression Analysis

The most basic reason why we do regression is to explain why there are variations in Y, in our case, financial performance of companies (measured by ROA). The simplest reason why we have variations in Y is because of variations in X (board composition variables) or rather, the variations in X drive the variations in Y.

Table 4.4: Regression Coefficients of the Board Composition Variables and Financial Performance Indicator

	Coefficients	***Standard Error***
Intercept	-0.99179046	2.147926753
Gender (% of females)	-2.519553378	5.089587637
Nationality (% of non-Kenyans)	0.568243329	2.638848879
Independence (% of NEDs)	-0.568276519	2.928931243
Educational qualification (% of degree holders)	1.739766885	1.637897291
Age (% above 45yrs old)	0.440453864	1.781009555

Source: *Research Findings*

The regression model $Y = \beta0 + \beta1\ X1 + \beta2\ X2 + \beta3\ X3 + \beta4\ X4 + \beta5\ X5 + \varepsilon$ becomes $Y = -0.99 - 0.440\ X1 - 2.519\ X2 + 0.568\ X3 - 0.568\ X4 + 1.739\ X5$. The Y intercept usually defines the value of ROA which in this case is -0.99. All other factors held constant, the negative ROA value could have resulted from the inclusion of one large negative ROA relating to Express Ltd. This company had an average ROA of -33.176, which can be considered an outlier lying on the very extreme end.

R-squared is a statistical measure of how close data is to a fitted regression line. It is also called the coefficient of multiple determination for multiple regression or the coefficient of determination. R-squared is always between 0 and 100%: 0% signifies that the model explains none of the variability of the studied response data around its mean while 100% signifies that the model explains all the variability of the studied response data around its mean.

In general, the higher the R-squared is, the better the model fits data. However, since R-squared cannot determine whether the coefficient estimates and predictions are biased, it is important for one to assess residual plots. Also, R-squared does not indicate whether a regression model is adequate. This is clear because you can have a low R-squared value for a good model, or a high R-squared value for a model that does not fit the data.

Regression Statistics	
Multiple R	0.194293341
R Square	0.037749903
Adjusted R Square	-0.054774145
Standard Error	4.480924477
Observations (n)	58

Figure 4.4: Regression statistics

From the regression statistics above, the R Squared is about 4%. This indicates that the model only partially explains the variability of the response data around its mean. In general, this low R-squared means that the model may or may not completely fit the study's data. This implies that the independent variables X1, X2, X3, X4 and X5 only explain 4% of the variations of financial performance of companies listed on NSE. Since R-squared cannot determine whether the coefficient estimates and predictions are biased, it is not quite clear whether indeed the low R squared value implies that this model does not fit the data.

One disadvantage of R-squared is that it can only increase as predictors are added to the regression model, though even this could be misleading. This research has focused on the relationship between variables and not really on prediction. For that matter, R-squared in

this instance is less important. A high R squared would however be important in prediction of Y.

Notably, a low R squared is not inherently bad. For example, if the R-squared value is low but we have statistically significant predictors, we can still draw important conclusions about how changes in the predictor values are associated with changes in the response value. Regardless of the R-squared, the significant coefficients still represent the mean change in the response for one unit of change in the predictor while holding other predictors in the model constant. Obviously, this type of information can be extremely valuable. Low R-squared is however very problematic when the purpose is to produce predictions that are reasonably precise.

Variability of data around regression lines is numerically described by R squared and S (standard error of the regression). Low R-squared graphs show that even high-variability and noisy data can have a significant trend. This trend shows that even though data points fall further from the regression line, the predictor variable still provides information about the response. Nearly identical predictions are produced by regression equations from both high and low R squared. However, the precision of these predictions is affected by the differing levels of variability.

The adjusted R squared is also negative, which goes further to indicate that the model may not necessarily be the best fit for the data. Both R^2 and the adjusted R^2 give an idea of how many data points fall within the line of the regression equation. However, the main difference between R^2 and the adjusted R^2 is that R^2 assumes that every single variable explains the variation in the dependent variable while the adjusted R^2 tells you the percentage of variation explained by only the independent variables that actually affect the dependent variable.

4.5 Discussion of Research Findings

From the descriptive statistics, results show that boards are generally underrepresented in terms of foreign and female board members. Most of the board members are more than 45 years old, highly qualified in terms of educational backgrounds, and a majority of them are non-executive directors. The standard deviations for each of the variables shows that they are not significantly dispersed from the mean values. Skewness results indicate that the listed companies have more ladies and NEDs below the respective means of 18.42% and 27.32% while the same boards have high numbers of independent, qualified and older directors – higher than the mean. Though all the variables are asymmetrical, gender and nationality variables are relatively close to zero/ relatively symmetrical, which means that the number of ladies and NEDs in the listed companies are around the modal number.

Kurtosis values indicated that independence, educational qualification, age and ROA variables are leptokurtic (clustered around the mean) while nationality follows a platykurtic distribution (less clustered around the mean). Gender is relatively close to normal/ mesokurtic distribution. It was generally concluded that all variables are not normally distributed.

The research study further dived into the establishment of whether there was any correlation between the board composition variables and the financial performance indicator (ROA). The Pearson correlation was used to determine the degree of association between independent variables and the dependent variable, as well the correlation within the independent variables. 95% level of confidence was employed in computing the significance of the coefficients.

From the analysis, it was established that each independent board composition variable has its own unique informative value in the ability to explain financial performance. Though in a small magnitude, gender and educational qualification were found to be negatively correlated with ROA and statistically relatively insignificant to firms' financial performance as indicated by the weak, negative Pearson correlation coefficients.

Age, board independence and nationality were however found to have a positive correlation with ROA and are concluded to be positive influencers of financial performance of listed companies.

Though the R squared value was relatively small, the aim of the research was to find out whether there was any effect of the independent variables on ROA, and not to predict Y from X, in which case the R squared is less important. From the regression results, it was found that the independent variables X1, X2, X3, X4 and X5 only explain 4% of the variations of financial performance of companies listed on NSE. In order to increase the R squared in future, it would be helpful to increase the number of predictors (independent variables) to the regression model; though this has in some past instances proven to be misleading. The R^2 is usually a statistical measure of how close the data are to a fitted regression line, and in this case, it was found that the data collected was noisy and showed high-variability.

My findings contradict Minguez-Vera & Campbell's findings from Spain which found that gender diversity has a positive effect on firm performance and also contradicts Randoy et al.'s studies which found no relationship between gender diversity and performance of companies in the Nordic countries of Denmark, Norway and Sweden. My findings however confirm Bohren & Strom's results which showed a negative relationship between gender diversity and firm performance of Norwegian firms. From this, we can conclude that the concept of gender diversity is inconclusive and more research on this area is recommended.

Generally, the study findings confirm many other studies' results, including KIM's 2017 report authored by Samuel Njihia, which noted that the global average entry age into the boardroom is 50 years, and that board diversity has a significant effect on the financial performance of companies listed at the NSE.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is a summary of the study which makes conclusions based on findings. The chapter also presents the implications from the findings, recommendations, limitations of the study as well as areas suggested for further research.

5.2 Summary

The sole objective of this research was to study the effect of board diversity on financial performance of companies listed at the NSE. The study used a causal and descriptive research design to unravel whether board diversity has any effect on performance of companies listed at the NSE.

The population of this study constituted all the 65 companies listed at the NSE but excluded 7 companies. These were excluded due to various reasons such as: some companies were de-listed, not much information on the directors was available, etc. The period of study was from 2011 to 2015. The major data sources were secondary in nature, and included the NSE handbook for the aforementioned period as well as the annual financial reports for the companies, which were downloaded from the internet.

The findings from the research generally showed that board diversity variables under study including age, nationality and independence are quite significantly associated with financial performance given the positive Pearson correlation coefficients, and that gender and educational qualification are negatively associated or correlated with financial performance (measured by ROA). The standard deviations for each of the variables indicated that they are not widely dispersed from the mean. From the mean values, we observed that women and non-Kenyan nationals are underrepresented on most boards, with a percentage of less than 50%. However it is important to note that most directors are highly educated and are appointed as non-executive directors with the mean for these two variables being above 50%. A majority of the directors are also above 45 years old.

5.3 Conclusion

The findings showed that board composition variables under study are quite significantly associated with ROA. The high mean values and small standard deviations signified the aspects that drive financial performance of companies listed at the NSE. Gender and nationality were positively skewed which implies that there are mole males and Kenyan nationals on boards, and only a few women and NEDs. Board member independence, educational qualification, age and ROA, on the other hand are negatively skewed with most directors being above the mean. Generally, the distributions were both positively and negatively skewed.

Kurtosis values indicated that there were more NEDs, degree holders, 45 year olds and above (i.e. leptokurtic - with distribution of directors clustered around the mean) while non-Kenyans were very few (platykurtic – with distribution less clustered around the mean, and a large standard deviation). The conclusion from kurtosis analysis is that the variables were not normally distributed. Distribution of female directors was found to be generally clustered around the mean.

From the correlation analysis, the findings suggested that each independent variable in board diversity has its own unique informative value in the ability to explain financial performance measured by ROA. Age, nationality and board member independence showed a positive correlation with ROA while gender and educational qualification showed a negative correlation with ROA, meaning that the latter are quite insignificant as financial performance indicators given the negative Pearson coefficients. 95% level of confidence was employed in computing the significance of the coefficients.

From the regression statistic R squared, it can be concluded that the independent variables: age, gender, nationality, educational qualification and board member independence can only explain 4% of the variations of financial performance of companies listed on NSE. However, the take away point is that indeed each of these variables has an effect on the financial performance of companies listed at the NSE. This is mainly because this study has statistically significant predictors from which we have

drawn important conclusions about how changes in the predictor values are associated with changes in the response value – even though the R squared value is low.

5.4 Policy Recommendations

Board diversity has been proven to improve the performance of companies due to the many benefits that come with diversified boards. Some of these benefits include: effective and constructive decision making; better and economic utilization of the diverse talented people; and improvement of investor relations and company reputation by portraying the firm as a citizen that is absolutely responsible.

Table 5.4: Summary of Correlation Analysis & Descriptive Statistics

Showing positive correlation with ROA	**Mean above 50%**
Age Nationality Independence	Age Educational qualification Independence
Showing negative correlation with ROA	**Mean below 50%**
Gender Educational qualification	Gender Nationality

From the study findings, it is noted that age, nationality and board member independence are positively correlated with ROA, and that the mean for age and independence is above 50%. From these findings, it is recommended that more independent non-executive directors, more non-Kenyan nationals be elected on boards since this will enhance financial performance.

Though having members who are above 45 years and above has been shown to positively influence financial performance, it is recommended that younger and more energetic people be elected to boards to offer fresher and more technological perspectives in order to grow faster and remain relevant as a company in this digital era. Varying age groups also generally have broader access to expertise and information.

It is also recommended that boards consider having more non-Kenyan nationals on boards for a mix of new cross-border ideas and problem solving – as this has been shown to positively influence financial performance.

Though the findings show that a majority of directors are highly educated (with a mean above 50%), this variable does not have much influence on ROA. However, it is crucial to have members who are skilled and well versed in their respective business areas. It is therefore expected that board members are learned people with great knowledge, skills and experience to enable them offer solutions to problems that companies face.

Finally, women are known for their attention to details, zeal to learn and they are great leaders in their various fields. Given a chance, they would transform the manner in which we approach problems, as well as how we offer solutions. Known for their skepticism and most for their risk-averse nature, shareholders would be in safe hands to appoint many women on their boards. That said, though the study shows a negative correlation with ROA, it is highly recommended that companies elect more women on boards to unveil the full potential and benefits that could come from inclusion of women on boards.

It is generally recommended that if shareholders of a company are electing new board members, they should choose them along the lines and considerations of age, nationality and independence. They should also consider choosing women and highly educated, skilled individuals.

5.5 Limitations of the Study

The findings of this study were based on only 58 companies and not 65, and may therefore not be generalized to all listed firms, though can be used as a reference. Even for the 58 companies which were studied, it was quite difficult to get the ages and educational qualifications for all the directors. This meant that for some companies, this data was not recorded, and also the time frame for collecting this missing information from each and every one of the 58 companies was too small to allow successful collection of the missing data. However, most of the data was available from the annual financial reports.

The study was also limited to the following variables: age, gender, nationality, independence and educational qualification. The performance of companies listed at the NSE is affected by many other factors which were not considered in this study. The studied variables are considered to only affect financial performance to a certain extent, and not totally.

The study covered a period of 5 years from 2011 to 2015 and though this duration is quite good to study the effect of board diversity on financial performance, it would be expected that the longer the period of study (e.g. 10, 15 years), the better it would be to draw bold and more accurate conclusions on the effect that board diversity has on financial performance. This is because we can garner much more information over the years to really study the trend of effect of the independent variables on the dependent variable.

Depending on the prevailing economic situations, regulations and demand on the capital market, board composition keeps on changing from period to period. Board diversity as defined by age, nationality, independence, gender, etc., would therefore change year on year. The findings therefore may not reflect the true effect of board diversity across the companies listed for a period of 5 years since some directors resign, others are appointed, some companies are delisted and listed again depending on their performance on NSE, etc.

The study was supposed to examine the effect of board diversity on financial performance with firm size as a control variable. However, there was insufficient information and little time to study the firm size of companies listed at the NSE, measured by the number of employees.

In a number of cases, the extracts of financial statements from the NSE Handbook contained mistakes which were beyond my control. This affected the values of my ROA; for example, for Express Ltd, the ROA calculated from the handbook was quite a huge negative figure, and in other cases, tax was calculated on a loss value, resulting either in a lower or higher loss value. In the first place, tax should not be calculated where a

company is in losses. This affected the ROA workings, and subsequently also affected the analysis of results.

5.6 Suggestions for Further Research

More performance variables should be considered in studying the effect of board diversity, since performance is not only defined by ROA, but by other factors including: leverage, company size, return on equity, etc.

More independent variables should be included in the study of effect of board diversity on financial performance of listed companies. Such variables would include but not limited to: level of industry experience of directors, personal attributes such as personality, cultural adaptability, interests and values, stakeholder perspectives, etc.

The prevailing macroeconomic variables including inflation, political risk, interest rates, etc., should be considered in further researches since these macroeconomic variables play major roles in decision making within boards of directors, and would essentially affect the financial performance of the listed companies.

Conduct similar researches covering longer study periods e.g. of 10, 15 years, etc. which will ensure that a more reliable trend of the relationship between independent and dependent variables is established. Longer periods of study will also ensure that the limitation of having an ever changing board composition is addressed, since the general trend can still be established from studying longer periods.

Ensure that sufficient time is allocated in the collection of data, e.g. information that may not be on the internet, NSE handbook or annual reports, such as age and educational qualification – which sometimes would require collection of primary data from each and every listed company. Sufficient collection and analysis time will ensure that conclusions are drawn from complete data, and that very minimal assumptions are made.

Out of the five independent variables which were studied, the concept of gender diversity and its effect on financial performance was generally inconclusive. This is observed from the fact that some of the past studies referenced in this paper showed a positive

relationship while others no relationship at all between gender diversity and financial performance. Similar to some other previous studies, this paper showed a negative correlation between gender diversity and financial performance. Clearly, the results are contradictory and more research on this specific area is recommended.

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APPENDICES

APPENDIX A: COMPANIES LISTED ON THE NAIROBI SECURITIES EXCHANGE AS AT 31ST DECEMBER 2015

AGRICULTURAL
Kapchorua Tea Co. Ltd
Kakuzi Ltd
Limuru Tea Co.
Sasini Ltd
Williamson Tea Kenya Ltd

AUTOMOBILES AND ACCESSORIES
Car and General (K) Ltd
Sameer Africa Ltd

BANKING
Barclays Bank Ltd
CFC Stanbic Holdings Ltd
I&M Holdings Ltd
Diamond Trust Bank Kenya Ltd
HF Group Ltd
KCB Group Ltd
National Bank of Kenya Ltd
NIC Bank Ltd
Standard Chartered Bank Ltd
Equity Group Holdings

COMMERCIAL AND SERVICES
Express Ltd
Kenya Airways Ltd
Nation Media Group
Standard Group Ltd
TPS Eastern Africa (Serena) Ltd
Scangroup Ltd
Uchumi Supermarket Ltd
Longhorn Publishers Ltd
Atlas Development and Support Services
Deacons (East Africa) Plc
Nairobi Business Ventures Ltd

CONSTRUCTION AND ALLIED
Athi River Mining
Bamburi Cement Ltd

Crown Berger Ltd
E.A.Cables Ltd
E.A.Portland Cement Ltd

ENERGY AND PETROLEUM
KenolKobil Ltd
Total Kenya Ltd
KenGen Ltd
Kenya Power & Lighting Co Ltd
Umeme Ltd

INSURANCE
Jubilee Holdings Ltd
Sanlam Kenya PLC
Kenya Re-Insurance Corporation Ltd
Liberty Kenya Holdings Ltd
Britam Holdings Ltd
CIC Insurance Group Ltd

INVESTMENT
Olympia Capital Holdings Ltd
Centum Investment Co Ltd
Home Afrika Ltd
Kurwitu Ventures

INVESTMENT SERVICES
Nairobi Securities Exchange Ltd

MANUFACTURING AND ALLIED
B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East African Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
Eveready East Africa Ltd
Flame Tree Group Holdings Ltd

TELECOMMUNICATION AND TECHNOLOGY
Safaricom Ltd

Source: *NSE Handbook, 2015*

APPENDIX B: DATA COLLECTION SHEET FOR THE EFFECT OF BOARD DIVERSITY ON FINANCIAL PERFORMANCE OF COMPANIES LISTED ON THE NAIROBI SECURITIES EXCHANGE

Companies	Average ROA	Gender (% of women)	Nationality (% of non-Kenyans)	Independence (% of NEDs)	Educational qualification (% of degree holders)	Age (% above 45yrs old)
Kapchorua Tea Co. Ltd	0.038	0.00%	42.86%	71.43%	-	-
Kakuzi Ltd	0.079	0.00%	42.86%	71.43%	-	-
Limuru Tea Co.	0.123	0.00%	25.00%	25.00%	-	-
Sasini Ltd	0.018	12.50%	0.00%	87.50%	100.00%	-
Williamson Tea Kenya Ltd	0.064	0.00%	42.86%	71.43%	-	-
Car and General (K) Ltd	0.037	0.00%	28.57%	71.43%	-	-
Sameer Africa Ltd	0.027	0.00%	16.67%	83.33%	100.00%	-
Barclays Bank Ltd	0.041	45.45%	0.00%	81.82%	100.00%	50.00%
CFC Stanbic Holdings Ltd	0.027	22.22%	22.22%	77.78%	-	-
I&M Holdings Ltd	0.036	12.50%	12.50%	87.50%	-	-
Diamond Trust Bank Kenya Ltd	0.031	15.38%	23.08%	92.31%	100.00%	90.91%
HF Group Ltd	0.020	20.00%	10.00%	90.00%	-	-
KCB Group Ltd	0.034	27.27%	0.00%	81.82%	100.00%	-
National Bank of Kenya Ltd	0.006	22.22%	0.00%	88.89%	100.00%	-
NIC Bank Ltd	0.030	16.67%	8.33%	83.33%	100.00%	-
Standard Chartered Bank Ltd	0.041	22.22%	44.44%	66.67%	-	87.50%
Equity Group Holdings	0.051	22.22%	55.56%	77.78%	88.89%	-
Express Ltd	(33.176)	20.00%	20.00%	60.00%	-	-
Kenya Airways Ltd	(0.078)	23.08%	23.08%	92.31%	100.00%	84.62%
Nation Media Group	0.219	18.75%	50.00%	93.75%	100.00%	100.00%
Standard Group Ltd	0.022	12.50%	25.00%	62.50%	100.00%	-
TPS Eastern Africa (Serena) Ltd	0.017	15.38%	53.85%	84.62%	100.00%	70.00%
Scangroup Ltd	0.090	0.00%	57.14%	71.43%	100.00%	85.71%
Uchumi Supermarket Ltd	(0.082)	27.27%	0.00%	-	-	-
Longhorn Publishers Ltd	0.085	33.33%	0.00%	88.89%	100.00%	-

Atlas Development and Support Services	(0.670)	0.00%	-	62.50%	-	-
Deacons (East Africa) Plc	0.038	50.00%	16.67%	83.33%	83.33%	66.67%
Nairobi Business Ventures Ltd	0.062	0.00%	-	-	-	-
Athi River Mining	0.020	0.00%	66.67%	66.67%	100.00%	-
Bamburi Cement Ltd	0.112	16.67%	58.33%	75.00%	100.00%	75.00%
Crown Berger Ltd	0.065	14.29%	42.86%	57.14%	-	-
E.A.Cables Ltd	0.018	12.50%	12.50%	87.50%	100.00%	62.50%
E.A.Portland Cement Ltd	0.098	0.00%	16.67%	83.33%	-	-
KenolKobil Ltd	0.008	16.67%	16.67%	66.67%	-	-
Total Kenya Ltd	0.029	30.00%	80.00%	50.00%	-	-
KenGen Ltd	0.025	26.67%	0.00%	93.33%	100.00%	92.31%
Kenya Power & Lighting Co Ltd	0.032	18.18%	0.00%	72.73%	100.00%	81.82%
Umeme Ltd	0.090	18.18%	54.55%	72.73%	100.00%	0.00%
Jubilee Holdings Ltd	0.046	9.09%	54.55%	81.82%	-	-
Sanlam Kenya PLC	0.037	25.00%	62.50%	87.50%	100.00%	62.50%
Kenya Re-Insurance Corporation Ltd	0.112	27.27%	0.00%	90.91%	100.00%	81.82%
Liberty Kenya Holdings Ltd	0.032	16.67%	50.00%	83.33%	100.00%	83.33%
Britam Holdings Ltd	0.042	11.11%	11.11%	88.89%	100.00%	-
CIC Insurance Group Ltd	0.058	25.00%	0.00%	91.67%	66.67%	91.67%
Olympia Capital Holdings Ltd	0.011	16.67%	16.67%	66.67%	-	-
Centum Investment Co Ltd	0.116	33.33%	0.00%	100.00%	83.33%	83.33%
Home Afrika Ltd	(0.103)	28.57%	14.29%	85.71%	100.00%	-
Kurwitu Ventures	(0.117)	16.67%	0.00%	-	-	-
Nairobi Securities Exchange Ltd	0.170	27.27%	18.18%	90.91%	100.00%	-
B.O.C Kenya Ltd	0.087	33.33%	41.67%	75.00%	90.91%	91.67%
British American Tobacco Kenya Ltd	0.242	30.00%	30.00%	70.00%	100.00%	80.00%
Carbacid Investments Ltd	0.196	0.00%	40.00%	100.00%	100.00%	100.00%
East African Breweries Ltd	0.143	20.00%	70.00%	70.00%	100.00%	70.00%
Mumias Sugar Co. Ltd		25.00%	0.00%	-	-	-

	(0.075)					
Unga Group Ltd	0.049	25.00%	12.50%	87.50%	100.00%	100.00%
Eveready East Africa Ltd	(0.036)	50.00%	25.00%	87.50%	100.00%	75.00%
Flame Tree Group Holdings Ltd	0.153	20.00%	60.00%	40.00%	66.67%	-
Safaricom Ltd	0.176	36.36%	54.55%	81.82%	-	-