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Board characteristics and firm performance: evidence from Kenya

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BOARD CHARACTERISTICS AND FIRM PERFORMANCE:

EVIDENCE FROM KENYA

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Declaration

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the proposal contains no material previously published or written by another person except where due reference is made in the thesis itself.

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ABSTRACT

The board of directors is charged with the responsibility of facilitating changes that support the mission of the organization to realize its vision. In the recent past, a number of organizations listed in the NSE have collapsed with the board of directors taking the blame. However, for the boards to execute their functions effectively there is a need for exclusive competency that contributes to the sustainability of the organization in the long run. Therefore, given the importance of any board, it is vital to identify and assess their characteristics and its consequent impact on organizational performance.

This study explored the relationship between board characteristics and organizational performance. In common with similar studies, board characteristics is operationalized by six variables, namely audit committee independence, board size, board expertise, board independence, board gender diversity and board diligence. Performance is measured by return on assets (ROA[2]). The sample for the study is the 42 companies which were continuously listed in the Nairobi Securities Exchange between 2010 and 2014. Data for analysis comprised company-specific data as well as published information from the annual reports.. The choice of five year period for this study was informed by two reasons. Firstly, it is the medium term following the revision of Corporate Governance rules with guidelines issued in 2002 being revised in 2010. Secondly, the new constitution,2010 provides in Chapter 6 on Leadership and Integrity

[2] ROA – Return on Asset is an indicator of how profitable a company is relative to its total assets.

a number of key governance provisions that are applicable to the private sector.. The study used Fixed Effects Model (FEM) in estimating the hypothesized relationship between board characteristics and firm performance. Hypotheses were tested at 1%, 5% and 10% significance levels. From the study results, it was revealed that organizational performance was significantly influenced by board independence while other board characteristics were found to be statistically insignificant. The study further found that the firm characteristic with significant moderating effect were firm size and firm leverage.

The results of the study suggest a need for the government (in the case of public firms) and individual(s) owners (in case of private firms) to consider re-evaluating their boards by emphasising independence so as to generate better results. This action will see an improvement in performance of listed firms in the same industry/sector and market environment and even under the same regulatory arrangements. Theoretically, superior performance of the firm had higher likelihood of having a large proportion of independent directors in board since these managers have a better appreciation of the business and can therefore make better decisions.

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LIST OF ABBREVIATIONS:

BOD – Board of Directors

CG – Corporate Governance

CMA – Capital Markets Authority

NSE – Nairobi Securities Exchange

ROA- Return on Assets

TQ – Tobin's Q

DEFINATION OF TERMS:

ACin - Audit Committee Independence

BDDili - Board Diligence

BDInd - Board Independnece

BDSize - Board Size

FAge- Firm Age

FLev - Firm Leverage

FSize - Firm Size

WRep - Women Representation

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DEDICATION

I wish to honor the memories of my beloved father (Ayabei Chemweno) and my beloved brother (Robert Chemweno) by dedicating this thesis to them. They influenced my life and shaped my values and aspirations. May God grant them eternal rest.

Above all, in gratitude, I dedicate this work to Almighty God who made this possible at this stage of my life.

CHAPTER ONE: INTRODUCTION

1.1 Background

In today's globalized, ever changing and competitive business landscape, corporate boards have become critical for the smooth operation of organizations. More than ever, boards are expected to perform not just the monitoring of management but provide strategic directions especially in times of crisis (Finegold, Benson & Hecht, 2007). In addition, the board is also charged with the responsibility of facilitating changes that support the mission of the organization (Bairathi, 2009). For the board to execute its functions effectively, scholars concur on the importance of a competent board that contribute to the sustainability of the firm (Forbes & Milliken 1999; Carpenter & Wesphal 2001, Carter & Lorsch 2004; Leblanc & Gillies 2005). Therefore, given the importance of the board it is vital to identify and assess their characteristics and the impact of on firm performance.

Whilst the it's acknowledged that there are several determinants of corporate governance(CG) that affect the performance of the organization, this study focuses on impact of board characteristics on firm performance for companies listed in the Nairobi Securities Exchange(NSE), in Kenya. It should be anticipated that firms with robust governance practices should have market premium. However, empirical evidence has been conflicting on the impact of board characteristics on firm performance. This lack of convergence is the motivation behind this study.

1.2 Board Characteristics and Firm Performance

Evidence from studies over the last two decades, reveal a correlation between board characteristics and firm performance. For instance, firm performance is linked positively with the proportion of executive directors (Keil & Nicholson, 2003) and non-executive directors (Fan, Lau & Young, 2007). Vafeas, 1999, found that there was a significant influence of board characteristics such us audit committee, ownership structure and board control. In general, while providing support to existing theories, studies also produce conflicting evidence. meta-analysis of board composition, leadership structure and financial

performance carried out by Dalton et al. (1998) covering 54 studies of board composition and 31 studies of board leadership structure did not provide any systematic relationship between board structure and firm performance.

While the studies mentioned here cover a broad range of issues in corporate governance such as voting rights, disclosures, regulations etc, the current study focuses on the various characteristics of the board namely director ownership, audit committee, board expertise, board meetings and board size that should be examined for their impact on firm performance. In this study, CEO duality was not considered because the CMA guideline (2002) requires firms listed in the NSE to have the chairman as independent and non-executive.

1.3 Corporate Governance in Kenya

Corporate governance has been an important topic of policy reform and discussion in Kenya in the last two decades. The constitution that was promulgated in 2010 recognizes the value of good governance as demonstrated in the constitution. Chapter 2 article 10 (1) on National Values and Principles of Governance commits all persons, state organs and any other parties to the national values, good governance being one of the values. Chapter 6 of the constitution on Leadership and integrity stipulates the responsibility of leadership essentially promoting effective leadership which is a good tenet of good governance. Article 73 – 78 and subsequently the leadership and integrity act prescribe a code of conduct for all state and public officers (The Constitution of Kenya, 2010)

To further progress the Corporate Governance agenda, the Capital Markets Authority introduced new rules and guidelines over time, most recently its Capital Markets (Corporate Governance) Regulations, 2011. However, major challenges still remain on weak corporate governance practices that have seen the country perform poorly in international comparative rankings of governance and competitiveness.

In the recent Global Competittiveness Report (2014), Kenya ranked lowly on governance and accountability, competitiveness, and investor protection indicators. This low score indicates a serious need to push forward on corporate governance reform. The World Economic Forum's annual Global Competitiveness Report indicates a clear perception that Kenya's investor protection and corporate governance framework lags behind other countries. This contributed to an overall ranking in the Global Competitiveness Index (GCI) of 106 out of 144 countries in the world in 2013 (Global Competitiveness Report, 2014)

The GCI ranking is a reflection of the increased concern over corporate governance in the country after vicious boardroom wars rocked some listed companies, leading to drastic loss of value. A case in point are boardroom wrangles that saw CMC Holdings' shares suspended from trading at the Nairobi Securities Exchange for more than two years before a takeover bid was put in by Dubai-based Al Futtaim, saving shareholders from further losses. In 2010 East African Portland Cement Company (EAPC) issued a profit warning attributed to loss of market following management wrangles. Kenya Airways and Mumias Sugar companies have also been on the limelight (Cheruiyot & Korir, 2014).

In Kenya, by law and practice, the board is responsible for overseeing and directing the company and appointing top management. Moreover, the board has substantial freedom under the law to exercise or delegate that power as it sees fit. For listed companies, the Capital Markets Authority Guidelines recommend that the board define the company's strategy, oversee management and performance, identify principle risks and opportunities, develop remuneration and staff policy, and review internal controls and compliance.

The Corporate Governance Guidelines and Regulations for Intermediaries recommend that one third of board members be independent. They note that director appointment should be "sensitive to gender representation, national outlook, and should not be perceived to represent single or narrow community interest".

Capital Markets Authority regulation further mandates the creation of an audit committee of the board. This committee has oversight over financial reporting and internal controls, and should be composed of at least three independent and non-executive directors.

1.4 Problem Statement

The issue of characteristics of the board of directors as a corporate governance mechanism has received considerable attention in recent years from academics, market participants, and regulators. It continues to receive attention because theory provides conflicting views as to the impact of board characteristics on the control and performance of firms, while at the same time the empirical evidence is inconclusive. To date, the relationship between board structure and company performance has been the most studied aspect among all board investigations (Bhagat and Black, 1999). In these studies, it is often assumed that a company's financial performance is mainly determined by board characteristics. Studies relating to the impact of board characteristics on firm performance are not conclusive in nature. In studies conducted by Weir and Laing (1999) and Weir, Laing & McKnight (2002) they found limited proof to suggest that board characteristics impact firm performance. However, in other studies, enough evidence to support the argument certain characteristics of board impact on firm performance (Bhagat & Black, 1999; Kiel & Nicholson, 2003; Bonn, 2004). Nonetheless, the function performed by the board is significant to firm performance as the boards executes their responsibilities (Abdullah, 2004).

A study conducted by Ujunwa, 2012 using data from 122 quoted firms in Nigeria between 1991 and 2008 found that board size, CEO duality and gender diversity were positively linked to performance. Board nationality and ethnicity and board expertise were negatively linked to performance. Other studies corporate governance studies conducted include board characteristics and involvement in strategic decision making – Nigerian perspective (Ogbechie et al., 2009). In Kenya, a study by Ongore (2011) examined the interrelations among ownership, board and manager characteristics and firm performance in a sample of 54 firms listed at the Nairobi Stock Exchange (NSE). The results showed a significant positive relationship between managerial discretion and performance. This study therefore

seeks to contribute to literature on the impact of board characteristics on firm performance for firms listed in the NSE

Beyong the fact that literature on board charactertistics and firm performance has so far been inconslusive, there is little interms of study within the African context and more specifically Kenya. By way of illustration, over the past three years, over 1000 articles were published in the Social Sciences Research Network with the term "corporate governance" appearing as a key word in the abstract. Most of these researches have concentrated in developed economies. This is inspite of the fact that increasingly emerging markets like Kenya are playing an important role in the global economic given its economic growth prospects couple with improving physical and legal structures. Emerging markets Kenya have offered attractive opportunity for investors but also involved multifaceted risks at the country and company levels. These risks require investors to have a better understanding of the firm level governance factors in Kenya. Therefore, the study will seek to seek to contribute to understanding of the relationship between board characteristics and firm perfoamance.

Another impetus for this study is further fueled by the Kenyan financial markets crisis in the recent past (2014/2015). New challenges have emerged which require concerted efforts of all players in order to safeguard the integrity of the stock exchange (Mbaru, 2008). A number of stock brokers have not been operating their businesses within the kind of corporate governance framework that would be expected of them. Failure to manage their businesses in a professional manner and serious governance malpractices has seen some stock brokers so far experience significant financial difficulties forcing the Capital Markets Authority to place them under receivership/statutory management (CMA Report, 2009). The firms listed in the NSE are supposed to serve as investing vehicles for the public and they are supposed to be managed professionally in order to attract investor confidence and safeguard the publics' interest. The placement of Uchumi under receivership in 2006 and eventual delisting from the NSE is just but an example. The responsibility for collapse of

Uchumi then was placed right under the board of directors who were accused of ignoring governance structures and engaging in malpractices.

The fact that different companies operating in Kenya, in the same industry/sector and market environment and under the same regulatory arrangements generate different outcomes can be explained in terms of differences in the way they are run. How these companies are run is usually determined by their boards and this has generated interest in understanding how these boards operate or function.

This study seeks to begin to engage in the process of addressing the above issues raised. Indeed, insights into the board characteristics and its impact on firm performance will facilitate efficient allocation of resources within firm and consequent improvement in firm performance

1.5 Research Objectives

The objective of this study is to understand the underlying relationship between board characteristics and firm performance among the listed firms in Nairobi Securities Exchange. The specific objectives include to;

i. ascertain the relationship between the size of the board and firm performance
ii. examine the relationship between a board independence and firm performance.
iii. evaluate the relationship between board expertise and firm performance.
iv. determine the relationship between board diligence and firm performance
v. understand the relationship between the audit committee composition and firm performance
vi. explore the relationship between women representation and firm performance

1.6 Research Questions

With Kenya as the contextual setting for emerging markets, the development of effective boards could be achieved through the provision of the following research questions that focus on companies that are listed in NSE:

i. What are the effects of board size on firm performance
ii. What are the effects of the board independence on firm performance
iii. What are the effects of board expertise on firm performance
iv. What are the effects of board diligence on firm performance
v. What are the effects of board audit committee independence on firm performance
vi. What are the effects of women representation in the board on firm performance

1.7 Scope of the Study

A comprehensive understanding of corporate governance and firm performance in Kenya would require a study that focuses on the entire population of all businesses (state corporations, listed and non-listed businesses as well as family concerns). Due to the unique nature of state corporations as well as the closed nature of most family and private companies this researcher restricted the study to companies that are quoted in the Nairobi Securities Exchange. This is a unique set of corporates that have formal boards and provide regular information of their operations in the public domain. In addition, their shares are transferable and openly traded based on the market price which is in turn influenced by firm performance.

As at December 2014, there were 61 listed companies in the Nairobi Securities Exchange These companies are classified into ten categories as shown below:

i. Agricultural
ii. Automobiles & Accessories
iii. Banking
iv. Commercial
v. Construction and Allied
vi. Energy & Petroleum
vii. Insurance

viii. Investment

ix. Manufacturing & Allied

x. Telecommunications &Technology

1.8 Significance of the Study

This study adds to the body of knowledge upon establishing the relationship between board characteristics and firm performance in a number of ways. Gaining such evidence allows firms to reap the benefits of a strategic board. As the costs of meeting governance requirements are considerable, the outcome of this study has the potential to benefit the businesses, policy makers, professional bodies, and the wider community. The study leads to a further understanding of board dynamics and gives significant insights into key considerations for nominating directors into boards in Kenya.

Capital Markets Authority recently released a new code for corporate governance in 2010, with suggested implication of improved firm performance based on adherence. This study also provides an opportunity to examine the linkage between the board characteristics and firm performance that can be used by regulators.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature relating to corporate boards and firm performance. The literature review has been organised in the following sections. First section will review and summarise perspectives of popular theories relating to boards characteristics on firm performance. The second section will identify the specific board characteristic that affect firm performance.

2.2 Theoretical Perspectives

The role and impact of boards has been studied by scholars of different disciples such as law, economics, finance, sociology, strategic management and organization theory (Kiel & Nicholson, 2003). The extant literature has primarily focussed on the characteristics of the boards in affecting firm performance (Daily, Dalton, & Canella, 2003). In the meantime, some researchers have also paid attention to other factors such as ownership (Bathula, 2008), MD turnover and remunerations (Lausten, 2002) in impacting the performance of a firm.

This section reviews four major theoretical viewpoints of boards and governance dynamics that are considered pertinent for this research namely: agency theory, stewardship theory, resource dependence theory and stakeholder theory.

2.2.1 Agency Theory

The theory, which according to Habbash(2010) has received greater attention from academic and practitioners, contends that as firms expand in size the principals (shareholders) lose effective control thereby allotting professional managers (agents) to manage the business. In doing so, the agents over time steadily gain effective control over the business (Mizruchi, 1983).

In contemporary corporations the shareholders (principals) are dispersed widely and are therefore not normally involved in the daily operations and management of their respective firms, rather, they hire mangers (agent) to manage the corporation on behalf of them. The agents are engaged to manage the day to day operations of the corporation. The separation of ownership and controlling rights may result in disputes of interest between agent and principal (Habbash, 2010).

The fundamental principle of agency theory is that agents (managers) act out of self-interest and are self-centered, thereby, give less attention to shareholder interests which ends up causing a negative impact on the overall firm value. As long as the principal and agent utilities coincide, there is no agency problem. However, once their interests diverge; the agent will seek to maximize his utility at the expense of the principal (Eisenhardt, 1989).

In addressing the key agency issues, Coleman, 2007, presented the following ways of addressing the opportunistic tendencies of agents. Independent directors; Agency theory presume board of directors to incorporate a large percentage of independent directors for effective control. This is meant to reduce conflict of interest between agents and principals and thereby ensures a board's independence in monitoring and passing fair and unbiased judgment on management.

2.2.2 Stakeholder Theory

This theory is an annexe of the agency view which anticipates the agents (managers) to take care of the welfare of the principals (shareholders). Nevertheless, this tapered focus on shareholders has undergone a variation and boards are now supposed to take into consideration the interests of many other stakeholder groups (Freeman et. al 2004).

The debate among scholars is whether to take a broad or narrow focus on stakeholders. (Freeman et. al 2004), proposed a comprehensive view whilst Bathula (2008) offers a narrow view suggesting voluntary stakeholders shoulder some form of risk.

Despite its appeal, the stakeholder theory of variety proposed by Jensen (2001) has not been exposed to much empirical evaluation. At least two factors might have contributed to the

gap between theory and evidence. The first concerns the prevalence of externalities and monopoly situation. The second is the problem of measurement, especially in view of the problems associated with getting an accurate measure of the long-term value of the firm.

Stakeholder theory therefore proposes that the prominence of managerial activity should be on the growth and maintenance of all stakeholder relationships, not just that with shareholders. (Jensen, 2001).

2.2.3 Stewardship Theory

The stewardship theory proposes that agents are trust worthy custodians of resources entrusted to them which makes monitoring obsolete (Davis et al., 1997). This is in contrast with the agency theory which assumes that principals and agents have conflicting interests (Bathula, 2008). In this theory, managers are viewed as stewards. And as stewards, they most likely seek to maximise value for shareholders. Davis et al (1997) argues that by maximising value for shareholders, the stewards will attain organizational success which in turn satisfies their personal needs. The theory also proposes that autonomy should be given to stewards which in turn lower the cost of monitoring (Donaldson & Davis, 1991).

The theory portends that managers are impelled by non-finacial motives such as need for achievement and regonition and intrinsic satisfaction of successful performance. These concepts are well documented in the work of scholars like Herberg (1966) and McClelland (1961). Daily el,.al (2003) argue that steward are keen to protect their standing as expert decision makers. As a consequence, the managers run the firms in a manner that maximizes financial performance as this performance impacts on individual performance.

Davis and Donaldson (1991) argue that from the perspective of stakeholder theory, superior performance of the firm was liked to having a large proportion of independent directors (managers) in board since these managers have a better appreciation of the business and can therefore make better decisions. Boyd (1994) and Baysinger, Kosnick & Turk (1991) also

support this view. They opine that insider directors (managers), possess superior amount and quality information to make better decisions. This is corroborated by a study conducted by Bhagat and Black (1999) who found that firms with a higher number of outside directors faired poorly in comparison with firms who had less proportion of outside directors.

The stewardship theory considers composition of board of directors, position of the chief executive officer (CEO) and board size as essential elements for ensuring effective corporate governance within any organization, Coleman et.al, (2007).

2.2.4 Resource Dependency Theory

The resource dependency theory provided a theoretical basis for the roles of board as a resource to the firm (Hillman el., al 2000). Therefore, appointing directors can bring social capital and competence to the firm as this is a valuable quality that a director can bring to the board (Stevenson and Radin, 2000). From this point of view, board composition is regarded as a resource that can increase the value to the firm through improved performance?.

A fundamental argument of this theory is that, firms attempt to exert control over their environment by bringing on board resources needed to survive (Pfeffer & Salanick, 1978). Critical resources are often added to the board as way of managing dependence and therefore benefiting the firms. Outside directors "bring resources to the firm, such as information, skills, access to key constituents (e.g., suppliers, buyers, public policy decision makers, social groups) and legitimacy" (Hillman et al., 2000). A case in point is that following the financial meltdown of 2008, various financial instutions included directors with risk management knowledge to their boards. Once on the boards, this directors work to assist the firm (Hillman and Dalzie, 2003).

Resource dependency theory also adopts a broad view that the skills and knowledge of directors are resources that could be used to help the firm perform better. The resource envelope also include providing advice to management on strategic actions (Poppo and Zenger, 1998). In this case firms that are struggling with solvency issues are likely to

appoint a representative of financial institutions to their board (Mizruchi and Stearns, 1988). This theory therefore portends that the skills and knowledge of directors are resources that can help the firm perform better.

2.2.5 Integration of different theories

Each of the theories reviewed give primacy to a particular view on how boards should deal with board decisions. Table 2.1 presents a summary of the four theories, I discussed above.

Table 2. 1 Summary of Four Theoretical Perspectives and Implications for Boards

Theory	**Role of Board**	**Implications for board**
Agency theory	Managerial control	Independent boards are a mechanism for shareholders to retain ownership control rights and monitor performance
Stewardship theory	Managerial empowerment	The board controlled by management is empowered and manages corporate assets responsibly
Resource dependency Theory	Co-optation	Board with strong external links is a co-optation mechanism for firms to access external resources
Stakeholder theory	Uphold interests of all stakeholders	Maximising the shareholder returns is not sole objective; interests of all stakeholders should be equally honoured.

As abridged above, the agency theory focuses on the conflict between agents and principals while the stewardship theory views agents as custodians for the principals and proposes and alignment between stewards and organizational objectives. The stakeholder theory investigates the quandary posed by interests of different group of stakeholders. Resource dependency theory underscores the importance of a board as a resource.

This review of different perspectives clarifies the need for an integrated approach instead of a single perspective to understand the impact of board characteristics on firm performance. To gain a better understanding of board dynamics as highlighted in this section, there is need to integrate the different theories rather than consider a single theory in isolation. This approach is supported by Stiles (2001) who proposes multiple theoretical perspectives. Roberts et,.al (2005) also suggests theoretical pluralism.

The next section utilizes the four theoretical perspectives to identify specific characteristics and their influence on firm performance.

2.3 Empirical Review: Renewed Focus on Corporate Boards

This section covers review of literature to identify various board characteristics that should be examined to ascertain their impact on firm performance.

Various researchers have extensively investigated different facets of corporate governance dynamics; disclosures, regulations including audit committee, board characteristics, financial reporting, ownership structure and the overall board control level, and have found such factors having significant influence on firm performance (Eisenberg, et.al, 1998; Vafeas, 1999; Boyd, 1994; Yermack, 1996). This study focuses on the on board characteristics and firm performance relationship. These characteristics include board size, audit committee, board diligence, board expertise and board independence.

The subject of CG has received much attention all over the world, especially after waves of corporate scandals and the failures of some of the largest companies around the world. These firms include: Commerce Bank (1991) Enron (2001), Adelphia (2002), World Com (2002), Leahman Brothers (2010) and International News Corporation (2011). The collapse of these firms has highlighted the scarce role acted by the directors and let-down of CG processes (Ghabayen, 2012). Furthermore, the fact that these seemingly "too large to fail" firms were located in different parts of the world suggests that the catastrophe of corporate failure is not limited to specific geographical locations or jurisdictions: it's a world-wide problem.

Literature shows that each wave of corporate scandals over the years has reignited fresh debate on corporate governance. For instance, the 1990 financial crisis in Asia exposed the problem of weak checks and balances and governance practices. This led to a focus on insider trading. The second wave of scandals on the onset of the new millennium involving companies like Worldcom(USA), Enron(USA), HIH (Australia), Parmalat (Italy) and Air Newzeland (Australia). The collapse of these firms brought to the fore the failure of the governance process and this led to the emphasis on the role of audit committee and external auditors (Lockhart,2004; France& Carney 2002).

In 2008, the financial meltdown that was triggered by the collapse of the Lehman brothers, Freddie Marc, JP Morgan in the US led to the focus on executive remuneration and board independence. This heightened anxiety for transparency, accountability and regulatory oversight and once more put corporate governance and board effectiveness on the front burner of big business issues all over the world.

In Kenya, the first and second waves of international corporate scandals and failure did not have significant casualties. But this situation did not last for long has not held out for long[3]. Recent corporate scandals involving Uchumi Supermarkts, CMC Motors, Mumias, Imperial Bank 2015 and Dubai Bank 2015 have ignited debates on role of audit committee, external auditors and board independence.

Beyond corporate scandals, there have been other developments that have contributed to the renewed focus on corporate boards. For instance, heightened dissatisfactions by shareholders due to poor financial performance, falling share value have led to questions being raised on the level of competency of board of directors (Sherman & Chaganti 1998). In addition, the phenomenal growth exhibited by institutional investors such as banks,

[3] Uchumi Super markets, CMC Motors and Mumias are listed in the Nairobi Securities Exchange and are still operational. Both Imperial Bank and Dubai Bank are not listed and were promptly put under receivership by the Central Bank of Kenya in the fourth Quarter of 2015 due to malpractices and governance failure.

pension funds and mutual funds has also increased focus on corporate boards. These institutional investors have the expertise to perform fiduciary responsibility of a monitoring board to ensure good returns (Bolton & Roell, 2005). Another factor that has led to increased focus on boards is the increase recognition that a good board is a source of strength in a number ways; attracting investments, improved share performance and providing better long-term shareholder return (Lee, 2001; Carlsoon 2001). This is underscored by Healy (2003) who avers that it is now recognized that good corporate practices is a source of economic growth.

It is commonly noted that at the core of every corporate scandals is the question regarding ineffectiveness of the boards of directors. Thusin response to these corporate failures, a number of suggestions have been put forth on ways of enhancing the governance of firms in order to regain the lost trust. (Van den Berghe and Levrau, 2004). The collapse of Enron led to the enactment of 'The Sarbanes-Oxley Act 2002' in the US (Moeller, 2004). In the United Kingdom, Walker (2009) reviewed corporate governance codes and came up with commendations that included improving the quality of boards, functions, performance and renumerations. In South Africa, a revised King Report III was released in 2009 after the financial meltdown (Naidoo, 2009)

As part of their reform efforts the Capital Markets Authority in Kenya released a revised code of corporate governance (2011) for companies listed in the NSE. The new codes highlighted the roles of boards in good governance. Shortly afterwards, in 2014, the CMA revised the code again to bring them in line with the global best practices. The new code applies to all publicly quoted companies in Kenya and all other companies seeking to raise funds from the capital market through the issuance of securities or seeking listing by introduction. The proposed guidelines give companies the option of using them as specified or seek for exemption in line with industry demands. The 'apply or explain' model recognises that no set of regulations can be applicable to all types of listed companies (Business Daily, 2014)

Whilst thechanges that have been proposed and introduced world-wide were aimed at making corporate boards more effective, there are still challenges regarding how boards are constituted and structured, how they operate in terms of processes and how they perform their various roles. Suggestions such as reduced board size, increase board independence, audit committee independence and increase meetings have been put forward but so far concise models of how boards should function have yet to be found (Hermalin and Weisbach, 2003).

Suffice to say that the board is seen as a key player in the governance of companies which precipitates the need for a better understanding of how this body works. Most of the research works on this aspect have tried to seek optimal solutions (Adams and Ferreira, 2007; Drymiotes, 2007; Gillete et al., 2007; Hermanlin and Weisbach, 2007; Harris and Raviv 2008) with a focus on developed economies. Literature reviewed and anecdotal evidence shows that not much work has been done in the areas of corporate governance in the emerging markets of Africa.

2.3.1 Board Size and Firm Performance

Board size and firm performance relationship has received a lot of empirical considerations the earlierst work bein that of Lipton and Lorch (1992). Their study put forth a recommendation that a board should constitute between 7 to 8 members. They concluded that larger boards can result in time consuming effort in decision making. Their study is corroborated by Jensen (2001) who concluded that companies with oversized boards tend to become less effective. Lorsch however recommends a board size of 12 members which would lead to effective deliberations while allowing for staffing of board committees.

Other scholars support the argument of larger boards. The premise of this argument is that larger boards can allocate workloads by using committee so as to ensure indepth analysis of issues and avert burn out. VanNess, Miessing and Kang (2010) researched American listed firms and found that, larger boards had a positive correlation with firm performance. According to Cole et al (2008), larger and diversified firms have a higher number of directors in their boards. Similarly, a study by Rechner and Dalton (1991) has also reported

that large boards are associated with stronger performance. As can be seen from the above discussion, literature shows mixed results; some supporting small boards and others supporting large boards.

2.3.2 Audit Committee and Firm Performance

The audit committee is a subcommittee of the board whose work largely encompasses matters to do with audit, financial reporting and internal control. This committee is an integral part of internal control mechanism that help firms strengthen corporate governance. Audit committee are expected to undertake detailed review on behalf of the main board so as to free the main board time and also enable particular expertise of non-executive directors to be fully utilized (Klein, 2002).

On the negative side, Klein (2002) however argues that the independence of the audit committees may curtail the growth potential of an organization. This is brought about by internal managers and managers focusing increasingly satisfying the requirements of the committee thereby shifting attention away from the core business.

The above notwithstanding, an independent audit committee with requisite expertise aids firms reduce on internal control issues within the firm. However, this does not necessarily translate to improved performance (Krishnan, 2005). A study conducted by Mak and Kusnadi (2005) on Singaporean and Malaysian companies found a lack of significant relationship between firm performance and audit committee independence. Support for these findings was provided by Hutchinshon and Zain (2009) in their studyof 60 Malaysian companies which reported no positive relationship existed between audit committee and firm performance.

OECD & SEC have promoted the agenda of installing audit committees whose composition is majorly those of independent directors (Beasley & Salterio, 2001). However, given the financial frauds that have been observed over the last decade, it points to the likelihood that either the audit committee was not efficient in carrying out its responsibilities or under performance (Levitt, 1999).

2.3.4 Board Diligence and Firm Performance

In this study, board diligence refers to the frequency or the number of meetings held by the board in a calendar year. The intensity of board activity, a relevant board attribute, can be measured by the number of board meetings (Vafeas, 1999). However, there is mixed theoretical and empirical views as to the effect of boards meeting on firm performance. According to Gosh (2007), a ten percent improvement on board meetings resulted in a one percent increase in performance. Lipton & Lorsch 1992, posits that boards that meet regularly have a higher chance of executing their duties in line with the interests of shareholders. Frequency of board meetings has also been found to contribute to the quality of output of audit (Carcello, Hermanson, Neal, Riley, 2002). According to Carcello et. al, (2002), audit committees that meet regularly exhibit few financial statement fraud. A study conducted in Malaysia by Joln, Kaur and Cooper (2013) reported a converse relationship between board diligence and firm performance. This is further backed by Carcello et al (2002) who concede that frequency of board meetings include more than board meetings which include preparation and follow up. In summary, it can be posited that board diligence play a critical role in board performance.

2.3.4 Board Independence and Firm Performance

The independence of the board is often denoted by the number of non-executive directors viz-a-vis that of executive (Lawal, 2012). Despite the argument the non-executive and executive directors have pros and cons, majority of researchers favour independent directors (Andres et al, 2005). This is because of the perceived benefit that independent directors provide management due to their independence (Baysinger and Butler, 1985). Independent directors contribute to impartiality in board's strategic decision making including providing independent oversight on the management (Fama and Jansen, 1983).

Although the independence of boards is considered a key factor, there is lack of evidence that board independence improve firm performance (Adams et al., 2010). In a study conducted by Randoy and Jenssen (2004), board independence was found to be negatively correlate with the firm performance. It is critical to note that from recent research, board

independence led to an increasein company costs which could be due to communication breakdown (Adams and Ferreira, 2009).

The impact of board independence on financial performance is however inconclusive (Davidson III & Rowe, 2004). A challenge in gauging the relationship between independence of directors and firm performance is that their relationship is endogenously determined (Hermalin and Welsbach, 2001).

2.3.5 Board Expertise and Firm Performance.

Yusoff and Fauzia (2010) describe board expertise as the individual skill and knowledge of individual board member. These could have developed from education and various experiences. The combined skills and knowledge of the members is an intangible asset of the board and is a proxy that is associated with firm performance (Hillman and Dalziel, 2003). According to Igneley & van der Walt (2001), the expertise of a board member is key in decision making. For instance, oversight role can be successfully implemented if the board members are qualified and experienced.

In examining the resource dependency theory, qualified and experienced board members are a strategic resource and their experience and knowledge is found to be critical for firm performance (Hansell, 2003.) This is because this board members would ensure an effective board which requires "high levels of intellectual ability, experience, soundness of judgement" (Hilmer, 1998).

A number of studies have found a positive correlation between board expertise and firm performance (Hunt, 2000; Ljungquist, 2007). Experienced and qualified members of the board would be able to stimulate the boards to consider more altenatives when reviewing different positions (Cox & Blake, 1991). Agrawal and Chadha (2005), found out in their study that boards with higher levels of expertise exhibited reduced incidences of restated earnings.

Other studies have however found a negative correlation between board expertise and firm performance. In a study conducted by VanNess, et al (2010) on board composition and firm performance, it was found that the expertise at the board level negatively correlated with the firm performance. This implies that, the intricacies of daily business may transcend professional expertise. The growth may require more entrepreneurial skills. Gentebein and Voltante (2012) focusing on firms in Switzerland, reported a negative relationship between firm performance and board expertise.

2.3.6 Women Representation and Firm Performance.

According to Adams and Ferreira (2009), representation of women at the board level is still low. Concerned by the low representation of women on the board, a number countries are enacting laws to foster increased participation of women. The argument that has been put forward is that there is a relationship between women representation on the board and improved firm performance. Accroding to Carter et al., (2003), a higher proportion of women directors at the board correlates with better firm performance. A more diverse board of directors might lead to a better understanding of markets that are themselves diversified in terms of gender, increase firm creativity and innovativeness, improve decision-making as more alternatives are evaluated, select more productive board members, and improve the image of the firm.

Some empirical studies have found no influence on performance of gender diversity (Smith et al., 2007; Rose, 2007; Eklund et al., 2009). Other studies found that a higher proportion of women have had a statistically significantly positive effect (Erhardt et al., 2003; Campbell and Minquez-Vera, 2008). Still others found a negative effect (Bøhren and Strøm, 2007; Adams and Ferreira, 2009; and Ahren and Dittmar, 2012).

Table 2. 2 Summary of Previous Studies Conducted

Researcher	Country	Period	No of Firms	Summary of Findings
Ehikioya (2009)	Nigeria	1998 – 2002	107 Firms quoted in the Nigeria Stock	Empirical investigations revealed no evidence to support impact of board composition on firm performance.

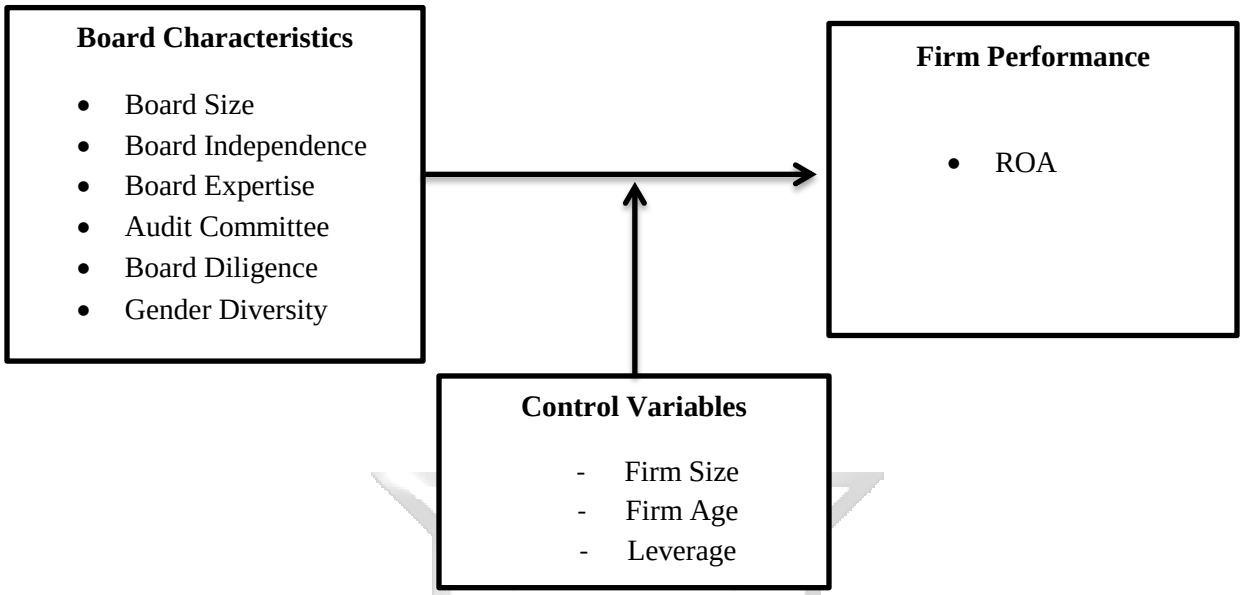
			Exchange	High Positive correlation between CEO duality and firm performance. Firm Size and Leverage also impact on firm performance
Illaboya and Obaratein (2015)	Nigeria	2005 – 2012	166 firms quoted in the Nigeria stock exchange	Research found a significant relationship between independent directors on audit committees and firm performance(profitability). A negative relationship was also fond to exist between board diligence and firm performance. Study found a negative relation between board size and firm performance
J.Thomas and Pirman (2003)	Thailand	1999 – 2001	24 life insurance companies in Thailand	Board composition was found to positively correlated with firm performance (ROA). Not relation was found between board size and firm performance.
Heenetigala and Armstrong (2011)	Sir Lanka	2003 - 2007	37 firms selected from the 50 listed firms in Sri Lanka	Board independence was found to have a significant relationship to firm performance
Coleman et. Al (2007)	Ghana, SA, Nigeria and Kenya	1997 - 2001	103 listed firms drawn from four countries.	Finds showed that a large and independent boards enhance firm value and that CEO duality have a negative correlation with firm performance. The size of audit committees and board diligence were found to have a significant positive

				relationship with firm performance. .
Bolbol et al (2004)	Egypt, Jordan, Oman and Tunisia	2000 - 2002	304 firms from a representative group from arab countries	Empirical evidence revealed a significant positive relation between board size and ROA & ROE. Board Independence also revealed a significant relation to ROA
Ujunwa (2012)	Nigeria	1991 – 2008	122 Firms Quoted in Nigeria	Empirical evidence from the study found that that board size, CEO duality and gender diversity were negatively linked with firm performance whereas board size and expertise found to impact positively on firm performance.
Lee and Filbeck (2008)	United States	2000	1013 Small Firms	Evidence from the study showed a negative relationship between board size and Firm Performance (ROA & TQ)

2.4 Conceptual Framework

A conceptual framework demonstrates the proposed relationship between the variables in the study (Mugenda & Mugenda, 2003). In this discourse, the accompanying conceptual framework is used to analyse the effects of board characteristics on firm performance. Board characteristics form the independent variables while firm performance forms the dependent variable. Board characteristics under study include; board size, board independence, composition of audit committee, board expertise, board diligence and gender diversity. The proxy for company performance is accounting based measure that is the Return On Assets (ROA). The framework is displayed diagrammatically in Figure 2.1 below.

Figure 2. 1 A conceptual framework for Board Characteristics and Firm Performance



Source: Researcher's Illustration

2.5 Operationalization

The following Table (2.3) summarizes the variables that were used in the study and their operationalization

Table 2. 3 Board Characteristics and Firm Performance

Variable Name	**Operationalization of the variable**
Dependent Variables	
Return on Equity (ROA)	Measured as a ratio of net income to total assets
Explanatory/Independent Variables	
Board Independence	The number of independent non-executive directors represented at the board
Board Size	The number of directors on the board.
Board Diligence	The number of board meetings held per year
Board Expertise	Assessment of the different professions represented in the board
Women Representation	The number of women directors on the board.
Audit Committee Independence	The proportion of non-executive independent directors on the audit committee
Control/Intervening Variables	
Firm Size	This is taken as a natural logarithm of the amount of revenue per annum for the firm.
Firm Age	No of years of a firm since incorporation
Leverage	Ratio of debts to firm's total assets

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the approaches used in achieving the objectives. Research design, population and sampling size have been highlighted. Model specification which involves structuring of estimation techniques which are the tests to be done on the model, statistical tests, and data source and type which shows where the data will be generated is provided. Finally, estimation issues and ethical considerations are discussed.

3.2 Research Design

Research design refers to the general plan for conducting a research, with the ultimate aim of answering the research questions (Lewis, Thornhill & Saunders, 2007). It also details the procedures necessary for obtaining the information needed to structure or solve research problems. In seeking to understand the impact of board characteristics on firm performance, a quantitative approach was used to provide empirical evidence. This approach has been preferred due to the considerable sample size (68.85%) and the fact that it allowed the researcher to draw inferences about cause and effect.

Further, in quantitative research, numerical data is used to deduce facts from theory. Data in quantitative research is gathered from natural setting in the field (Bryman and Bell, 2007). This study assumes the condition of causal relationship whereby the dependent variable (ROA) is presumed to be correlated with the hypothesized independent variables (size of the board size, board diligence, audit committee, board independence, and board expertise). Firm size, age and leverage as reviewed in the literature are used as control variable in the model.

3.3 Research Population and Sampling Frame

The population consisted of firms that were continuously listed in the NSE from 2010 to 2014. As at end of 2014, 61 companies were listed. Publicly listed companies were chosen for this study because they were considered as best proxies for the respective sectors and

likely to be among the leading in their economic segments in Kenya. Also, because they are public and subject to CMA regulations on governance, these companies potentially attract skilful and experienced individuals to their boards. The publicly listed company was also chosen due to availability of public data that can be analysed for this study. The data was collected for surviving 42 companies in the research period from 2010 to 2014. Companies that lacked information on some key variables were excluded from the study.

3.4 Data Collection Methods

This study used secondary data from multiple sources. The base data was obtained from the NSE Archive, which has all the annual reports of the listed firms. This data is longitudinal for each firm listed in the NSE from 2010 – 2014. The data on board characteristics was obtained from these annual reports.

3.5 Model specification and Estimation techniques

3.5.1 Model Specification

The study allows all independent variables to be included in the model because the main focus is on the long run relationship between the independent and dependent variables.

Following, Bolbol et al (2004); Ehikioya (2009); Heenetigala and Armstrong (2011); Ujunwa (2012) and Illaboya and Obaratein (2015), the empirical model adopted in this study therefore appear as follows:

$$\text{Firm Performance}_{it} = f(BI, ACI, BD, BS, BE, WR) \quad \text{.....3.1}$$

Where:

BI = Board Independence

ACI = Audit Committee Independence

BD = Board Diligence

BS = Board Size

BE = Board Expertise

WR = Women Represenation

Fage=firm age,

Fsize= firm size and

Flev=firm leverage

The model was controlled by firm size, age and leverage.

The econometric model is specified as follows;

$$FP_{it} = \beta_0 + \beta_1 BI_{it} + \beta_2 ACI_{it} + \beta_3 BS_{it} + \beta_4 BE_{it} + \beta_5 BD_{it} + \beta_6 WR_{it} + \beta_7 Fage_{it} + \beta_8 Fsize_{it} + \beta_9 Flev_{it} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.2$$

Where other variables are as described above.

3.5.2 Estimation Techniques and Diagnostic Tests

The study uses a panel data estimation technique because of its several advantages over both cross-section and time-series data sets. The technique has a greater statistical degrees of freedom and less multicollinearity leading to more efficient estimates, (Hsiao, 2003) and gives greater flexibility in modeling differences in behavior across the firms under study which enables us to control for unobserved heterogeneity.

The panel data analysis method has two main approaches, namely; the fixed effects model (FEM) which assumes omitted effects specific to cross sectional units are constant over time and the random effects model (REM) which assumes the omitted effects are random over time.

In order to choose between the random effects and fixed effects, a Hausman test was conducted. It tests whether the unique errors are correlated with the regressors; the null hypothesis is that they are not (Greene, 2008). If the null hypothesis cannot be rejected, then random effect is preferred because it is a more efficient estimator. Other diagnostic tests based on the specification model include; Multicollinearity, Normality, Linearity and Stationarity. The specified model was thus estimated using statistical programme (STATA) and the study objects are investigated through systematic tests.

3.6 Ethical Issues in Research

The researcher also ensured that the data analyst behaved ethically and maintains credibility in generating the research output from the data analysis tool (STATA). In addition, the research ensured confidentiality is maintained by not identifying individual directors.

3.7 Limitations of Study

There was no independent reviewer during data collection as mitigation against possibility of human error. Since the study covers listed companies in the NSE in Kenya, the findings may not be applied beyond the NSE. Finally, during data collection, several annual reports were not available either in hard or soft copy.

CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter details the results analysed from the consolidated data of the Nairobi Securities Exchange (NSE) for the period between 2010 and 2014. Since the data has taken panel dimension, we are able to tell from the 42 firms sampled on board characteristics and respective firm performance. A comprehensive technical[4] and fundamental[5] analysis undertaken investigates, using varied specific parameters such as the size of a board, board independence, composition of audit committee, board expertise, board diligence and board size on significance of exogenous and endogenous factors relating to the expected returns from the stock market and the nature of such causation.

4.2 Descriptive Statistics

The study considered descriptive statistics (mean, standard deviation, minimum and maximum) for the panels. Table 4.1 depicts ROA of an average of 0.0966 with a minimum of -0.794 and a maximum of 0.6157. Board size and board independence were on average 9 and 5.98 respectively with a standard deviation of 2.8. The board with the least members had 3 individuals while the board with maximum number of individual had 15 directors.

The composition of audit committee depicted by the proportion of non-executive independent directors on the audit committee on average was 3 members. Also on assessing the different professions represented in the board, it was found that professionals ranged between two and ten. The average number however was at least 5 among the firms under study. Similarly, on board diligence, the results show that approximately 6 board

[4] Technical approach considered two methods which include analysis of graphs where we try to find out and describe certain patterns that are followed by established parameters. In second approach we have made use of quantitative parameters like trend indicators, yearly ups and downs, maximum and minimum values of a year. It also includes other parameters (control variables) across the panels.

[5] It involves; audit reports, financial status of the company e.g. dividends as can be observed from our descriptive statistics.

meetings were held per year. The highest number of board meetings was 33 while other firms held only two boards meetings. Table 4.1 shows other features (standard deviations and range) for within and between firms. More other details regarding the characteristics of these firms within and between themselves is provided in appendix A.

Table 4.1 Descriptive Values from Regression Analysis (Dependent and Independent Variables)

Variable	Mean	Std. Dev	Minimum	Maximum
ROA	0.097	0.15	- 0.79	0.62
Board Size	9	2.54	3	15
Board Independence	5.98	2.81	0	14
Board Expertise	4.29	1.28	2	8
Board Diligence	5.7	3.56	2	33
Audit Committee Independence	3.51	0.89	2	6
Women Rep	1.27	1.2	0	5
Firm Age	57	25.45	12	113
Firm Leverage	0.48	0.20	0.05	1.03
Firm Size	23022.28	35671.45	92.25	222302.3

Total Observation = 210, n = 42 and T = 5

4.3 The effects of board characteristics on the performance of listed firms at Nairobi securities exchange (NSE)

The study elucidates the contribution of the size of a board, board independence, board expertise, board diligence and composition of audit committee on performance of listed

firms at NSE. The descriptive statistics show how variations across panels and among the parameters elucidate this predisposition. In this objective, the interestis to explore how the said variables with their stochastic nature relate with performance in either firm under study. The conceptualized model was estimated by fixed effects regression with pre-estimation of multicollinearity, unit roots and Hausman model specification test as follows;

4.3.1 Multicollinearity test

Multicollinearity is considered to exist when there is perfect linear relationship between the variables under the study. The correlation matrix was used to determine if any pair of independent variables was highly collinear through the magnitude of the correlation coefficient of the pairs of variables established. This bias arises when one or more pairs of independent variables are perfectly correlated to each other.

Table 4.2: Correlation Results of Board Characteristics and Firm Performance

Variables	ROA	Board Size	Board Independence	Board Expertise	Audit Committee Independence	Board Deiligence	Women Representation	Firm Age	Firm Leverage	Firm Size
ROA	1									
Board Size	0.0922	1								
Board Independence	0.0007	0.782	1							
Board Expertise	0.0652	0.7805	0.572	1						
Audit Committee Independence	0.0304	0.3791	0.3446	0.4044	1					
Board Deiligence	-0.0926	0.3285	0.2958	0.3068	0.2703	1				
Women Representation	0.1159	0.6386	0.4907	0.5139	0.4216	0.3516	1			
Firm Age	-0.2289	0.3665	-.4154	-.13837	-.3267	-.1046	-.2148	1		
Firm Leverage	-0.1688	0.2309	0.0933	0.1956	0.2574	0.2022	0.1418	-.0001	1	
Firm Size	-0.1053	0.1621	0.0532	0.1518	0.1537	0.0888	0.1977	-0.1585	0.3923	1

Multicollinearity was considered present if the correlation coefficient was above 0.8 as it may lead to spurious regression. As indicated in Table 4.2, the study found that all pairs had a correlation of less than 0.80 which is the threshold to permit retaining of all the variables under study. Retaining variables implies that the coefficient of determination improves as described in Woodridge (2004).

4.3.2 Unit root test

To avoid change of the estimates over time due to non stationarity, unit root tests were applied to investigate or detect non stationarity in all the study variables which in turn leads to spurious estimates. In this case, all board specific characteristics under study were subjected to Levin-Lin-Chu unit-root test. In this test if variables are found to be non- stationary, first differencing or successful lagging is applied until the bias is eliminated. The null hypothesis in this case was that the variable under consideration was non-stationary or has unit root and in this study, it was stated as; Null hypothesis (H_0): Panels contain unit roots and alternative hypothesis (H_1): Panels are stationary. From Table 4.3 below, the Levin-Lin-Chu unit-root test revealed that almost all variables had p values less than significance level of 0.05 which led to rejection of the null hypothesis (that the variables had unit root). Therefore, the first differences were conducted in an attempt to correct for non stationarity. Only one variable that is board composition of audit committee was found to be stationary after first differencing. The differencing however leads to loss of degrees of freedom although this is not detrimental given the fact that the variable attained stationarity at only first differencing that is losing one time period.

Table 4.3: Unit Root Tests

Variables	Unadjusted t-statistic	P value at lag(0)	Unadjusted t statistic after 1st differencing	P value at lag (0) after 1st differencing
ROA	-28.2947	0.0000		
BD size	-20.7370	0.0000		
BD independence	-17.0413	0.0000		
BD expertise	-15.8846	0.0000		
BD diligence	-6.1223	0.0004		
BD Composition of audit committee	-5.8080	1.0000	-8.6384	0.0000
Women. rep	-8.8886	0.0011		
Firm size	-36.7598	0.0000		
Firm age	-7.8976	0.0000		
Leverage	-9.5e+02	0.0000		

Source: Author's computation

4.3.3 Fixed Effects versus Random Effects model

The model selection compared fixed effects and random effects where the former assumes that the real effect size is the same in all 42 firms and the summary effect is the estimate of this common effect size while the latter assumes that the true effects size varies from one firm to another and that the firms under study represents a random sample of effects size that could have been observed and thus the summary effect is the estimate of the mean of these effects. According to Borenstein (2009) and Woodridge (2004) under fixed effects, there is an assumption that all the dispersion in observed effect is due to sampling error whereas under random effects, there is allowance that

some of the dispersion observed may illustrate real differences in effect size across firms in this case listed firms under NSE.

In order to determine the best fitting model of firm performance, this study adopted Hausman specification test where the fixed effects model specification was compared to the random effects model. The null hypothesis was that the differences in coefficients are not systematic. Consequently, on conducting the test, it was shown that P-value of 0.0341 at 0.05 level of significance implied that the individual firm effects are best modelled using the fixed effects method (See appendix B).

In this study, the Hausman test preferred fixed effects model to random effects model which restricts estimation effects of the mean of the distribution effects to one true effect. Despite varied information about a different effect size each listed firm represented in the study, it was thus necessary to ensure that all these effects size are represented in the summary estimate. According to Baltagi (2008), preference of the fixed effects, implies the need to estimate the mean effect in the 42 firms under study.

4.4 Results for Fixed Effects Model

The adoption of fixed effects model was based on firms established to be sharing the common effect size in terms of performance and the core objective of establishing the contribution of board characteristics on firm performance. After undertaking necessary pre-estimation diagnostic tests and model selection test, the fixed effects invariant is considered valid for interpretation. Note that in this model, it is assumed strict exogeneity as suggested by Anderson and Hsiao, (1982). This study also concurs with Bertrand and Schoar (2003) that sometimes explicitly estimating fixed effects can be useful because the fixed effects can inform about parameters of interest.

In estimation, the study first estimated the effect of board characteristics using the Fixed Effects Model (FEM) without intervening variables and later incorporated a full FEM with intervening variables. As can be observed, the FEM without intervening variables

had a an overall p value of 35.63% which was far way beyond the 5% level of significance implying that only board characteristics were not significant in explaining firm performance (see appendix C).

The overall R squared including the R squared of within and between firms in terms of percentage were shown to be too low below the unit. This implies that more other factors are necessary to improve the model to a level that it can significantly elucidate the clear unbiased relationship between board characteristics and firm performance. However, the model indicated board independence and audit committee independence as the only variable which significantly determined firm performance positively while the other variables in the model exhibited insignificant effect.

Table 4.4 indicates the results of the estimated model incorporating intervening variables.

Table 4.4: Fixed-Effects (within) Regression Model with intervening variables

```
Fixed-effects (within) regression               Number of obs      =       168
Group variable: compcode                        Number of groups   =        42

R-sq:  within  = 0.1968                         Obs per group: min =         4
       between = 0.0446                                        avg =       4.0
       overall = 0.0407                                        max =         4

                                                F(9,117)           =      3.19
corr(u_i, Xb)  = -0.9242                        Prob > F           =    0.0018
```

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bdsize	-.0008301	.0105079	-0.08	0.937	-.0216404	.0199802
bdind	.0156973	.0085799	1.83	0.070	-.0012948	.0326894
bexp	-.0082765	.0136282	-0.61	0.545	-.0352665	.0187135
acind						
D1.	-.1107208	.0611757	-1.81	0.073	-.2318761	.0104346
bddeli	.0016423	.0045882	0.36	0.721	-.0074444	.010729
wrep	.0020548	.0168157	0.12	0.903	-.0312479	.0353575
fage	-.0113334	.0070474	-1.61	0.110	-.0252905	.0026237
flev	-.6638528	.1657213	-4.01	0.000	-.9920551	-.3356506
fsize2	1.04e-06	7.09e-07	1.46	0.146	-3.68e-07	2.44e-06
_cons	.9700771	.4041026	2.40	0.018	.1697731	1.770381
sigma_u	.33806894					
sigma_e	.08895897					
rho	.93524206	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(41, 117) =     7.69                 Prob > F = 0.0000
```

[6] D1 represents first difference

The results in Table 4.4 shows the total variations of 4.07% explaining performance of firms while the other proportion may have been factored in by other factors not considered by this study. Also, 4.46% of the variations explain firm performance between the panels and approximately 19.68% of the variations explain firm performance within the panels. This implies that all variables considered in the regression model best explains performance of firms within themselves better compared to overall or between the same firms. Despite low variations in respective panels which is expected due to cross sectional component, the study revealed overall significance of 0.0018 which means that all variables (board characteristics) utilized in

the model were statistically significant at the selected significance levels in explaining the performance of listed firms at NSE unlike in the previous model (appendix C).

Further, the results specifically indicated that the coefficients of the board independence and audit committee independence representing board characteristics as being statistically significant in influencing firm performance at NSE since their t statistics were 1.83 and 1.81 respectively. Their confidence intervals included zero since its significance was pegged at 10% compared to the significant intervening variable that is firm leverage (t statistics=4.01) which was significant at 1% level. Also, the standard deviation of residuals within groups and the standard deviation of residuals between groups were 0.3381 and 0.089. On the other hand, variance attributable to the differences across the panels was 0.9352. However, there is no correlation between the error terms and the regressors.

Further analysis of independent variable is as follows:

4.4.1 Board Size

The board size is measure as the number of directors in a board. The board size was found to have a negative coffecient and is not statistically significant with a t-statistic of 0.08. This results concurs with a study conducted by Lee and Filbeck (2008) on 1013 small firms in the USA. Their study found that the board size did not impact on firm performance. The mean of the board was found to be 9. The board size was found to not be statistically significant therefore the boarddize does not impact firm performance.

4.4.2 Board Independence

Board Independence refers to the number of independent non-executive directors at the board. Board independence has a positive coefficient and is statistically significant with a t-statistic of 1.83. This implies that the independence of the board significantly impacted on firm performance. This is consisted with studies conducted by Heenentigala and Armstong (2011), Illaboya and Obaratein (2015). It is however inconsistent with findings by Randoy and Jenssen (2004) which found board independence to negatively impact firm performance. The CMA Guideline (2002)

require firms listed in the NSE to have atleast a third of their directors to be independent and non-executive. The mean of board directors was five members and mean board size being 9. This implies that most boards are properly constituted.

4.4.3 Audit Committee Independence

The audit committee independence refers to the number of independent non-executive directors represented at the board committee. The CMA guidelines (2002) require that the majority of members of audit committee be independent and non-executive. Audit committee was found to be statistically significant with a t-statistic of 1.81. This implies that an independent audit committee was found to significantly impact the performance of the firms in the NSE. This is however inconsistent with a study conducted by Mark and Kusnadi(2005) on Singaporean and Malaysian firms found a lack of significant relationship between firm performance and audit committees. The mean of the audit was three. This is in line with the CMA guidelines (2002) which require firms to have atleast three members represented in the audit committee.

4.4.4 Women Representation

Women representation is a measure of the number of women directors represented at the board. Women representation was found to have a positive coefficient but not statistically significant with a t-statistic of 0.12. This results is concurs with other studies conducted by Smith el al., (2007), Rose (2007) and Eklund et al., (2009) who found no influence of firm by gender diversity. Though the number of women represented at the board had a positive impact on firm performance, it was not statistically significant.

4.4.5 Board Diligence

Board diligence is a representation of the number of board meetings held in a year. Board diligence was found to have a negative coefficient but not statistically significant with a t-statistic of 0.36. The result of the study is consistent with a study conducted in Malaysia by John, Kaur and Cooper (2013) who reported that the frequency of board meetings did not have a significant impact on firm performance. The results of this study show that the board although the frequency of board meetings have a positive

relationship with the firm performance, it does not significantly impact on firm performance.

4.4.6 Board Expertise

Board expertise is measure as the number of the different professions represented at the board. Board expertise was found not to be statistically significant with a t-statistic of 0.545 and negative coefficient. The results of this study are consistent with VanNess (2011) who found that the expertise at the board negatively correlated with firm performance. This implies that, the intricacies of daily business may transcend professional expertise. Gentebien and Voltante (2012) focusing on firms in Switzerland reported a negative relationship between board expertise and firm performance.

4.5 Linearity, Non-Stationarity, Heteroscedacity and Autocorrelation

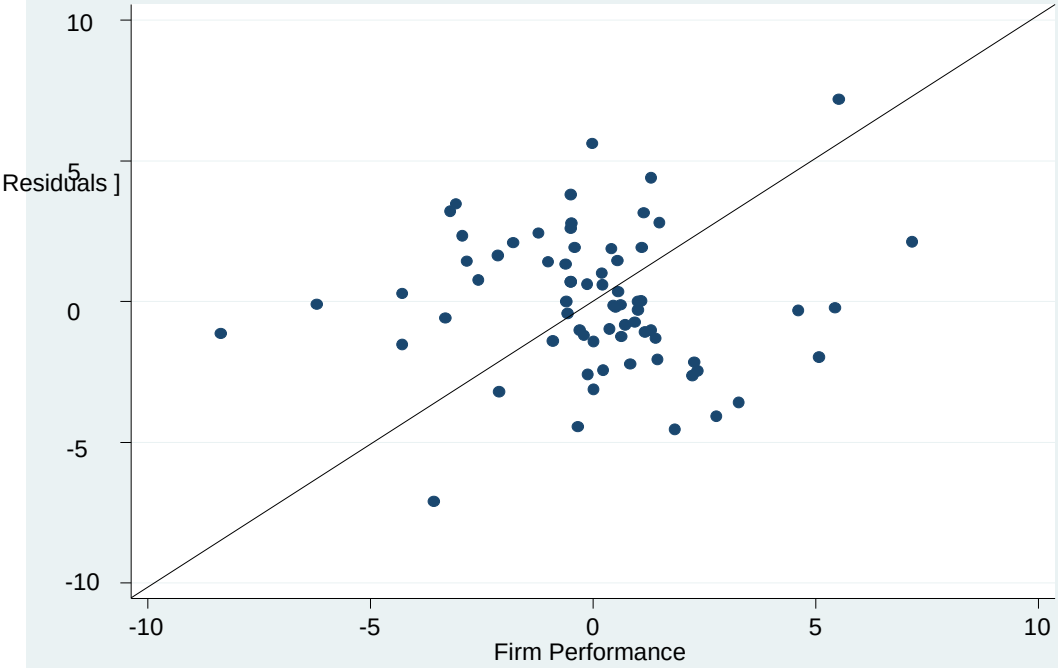
Due to time series component, the fixed effects model makes assumptions on normal distribution of the stochastic random error term, linearity, constant variance of error terms across observations and no serial autocorrelation of the error terms. However, regarding heteroscedasticity and autocorrelation, Waldinger (2011) suggests that standard regression packages (such as STATA) will do the adjustment of standard errors automatically if one specifies a fixed effects model. This implies that panel data approach takes care of the presence of varying variance of the error terms across all the observations in the panels and any suspected or proved correlation between random error terms of the subsequent time periods. Therefore, the following diagnostic tests were undertaken so as to validate the yielded estimates.

To proceed with estimation, this study applied the Shapiro Wilk test for normal data or distribution of the stochastic random error terms. The study found out that at 10% significance level, overall residuals of the variables were normally distributed. The p-value of the residuals was 6.53% which slightly exceeds 5% level but less than 10% level implying that the null hypothesis of normality of residuals is not rejected therefore the data was normally distributed.

4.5.1 Linearity

The study adapted scatter plot to these effects. The scatter plot of estimated residuals square against the fitted values is shown by Figures 1 below. It can be observed that the plots are fairly symmetrical around 45 degree lines which imply that when making unusually large or small prediction, the model fails to make systematic errors.

Figure 4.1 : Graph of residuals against the fitted values of firm performance



CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter presents comprehensive discussions of the study findings. Conclusions are thereafter made with a key focus on the established linkage between board characteristics and firm performance at Nairobi Securities Exchange in Kenya. Later, relevant policy recommendations and areas of further research are suggested as a way of filling the gap.

The literature reviewed has expounded on the four theoretical perspectives that are important in a study of board characteristics and firm performance. In addition, the empirical literature that has been cited has identified the important board characteristics that shall be examined in this study. These board characteristics include board size, board independence, board expertise, audit committee independence and board diligence.

5.2 Discussion of the findings from fixed effects model

Literature reviewed in this study considered the different facets of corporate governance dynamics that is regulations which includes firm and board characteristics, (Boyd, 1994; Eisenberg, et.al, 1998; Vafeas, 1999; Yermack, 1996; Thomas and Pirman, 2003; Ehikioya, 2009; and Illaboya and Obaratein, 2015). These studies however demonstrate inconclusiveness with regard to the effect of these factors on firm performance. Given the introduction of the new guidelines as stipulated by CMA pertaining board composition in Kenya, there is no study conducted relating these aspects to firm performance. This study thus focuses on testing empirically the contribution of board characteristics on firm performance. The board characteristics that

were examined include board size, composition of audit committee, board diligence, board expertise and board independence. This is because board characteristics form the core framework of firm performance based on reviewed empirical literature. The study explores only significant board characteristics as revealed in the final model. Upon specifying the fixed effects model, the study results indicate that BOD characteristics have an effect on firm performance. Specifically, if all factors were kept constant, firm performance would only be higher by 9.7%. Board independence was also shown to significantly increase firm performance at 10% significance level by 1.57% holding other board characteristics constant. This finding concurs with the study results of Hermalin and Weisbach, (2003), Andres et al, (2005) and Lawal, (2012) that favours independent directors. These findings may be attributed to the fact that the board independence is associated with perceived benefit that independence of directors lead to better management of their respective firms an idea which is similar to that of Baysinger and Butler, (1985). Other study that revealed significance of board independence on firm performance was conducted by Heenetigala and Armstrong (2011). However, some authors found a contradicting evidence in their study which revealed that board independence had negatively correlation with the firm performance (Randoy and Jenssen, 2004; Adams and Ferreira, 2009). This led to a conclusion that board independence has an impact of increasing cost to company which could also be attributed to communication breakdown.

According to Klein, (2002) audit committee is expected to undertake detailed review on behalf of the main board so as to free main board time and also enable usage of particular expertise of non-executive directors. Considering the independence of audit committee however, the regression results showed a negative relationship with firm performance. It was found that an extra independent person or individual to the audit committee led to a significance reduction of firm performance by 11.07% holding other factors constant. Independence of audit committees may restrain growth potential of a firm. This may be attributed to internal managers and managers being more focused on satisfying the requirements of the committee thus shifting attention on core business. This finding is

supported by the findings of Krishnan (2005) and Hutchinshon and Zain (2009) who showed an inverse relationship between independence of board audit committee and firm performance whereby the study concluded that audit committee independence may not necessarily translate to improved firm performance. However, Mak and Kusnadi (2005) established insignificant effect of audit committee independence and firm performance. This contradicted this study finding which revealed a significant effect of audit committee on firm performance.

Some of the board characteristics which were not statistically significant include board size, board expertise, board diligence and gender diversity (women representatives). Despite insignificance of these variables, they had the right and expected sign. However, for policy reasons, only significant factors (board characteristics) are considered. The study finds are based on the secondary data obtained from the records of Nairobi Stock Exchange. The research objectives were presented at 90%, 95% and 99% confidence intervals.

5.3 Conclusions of the study

Based on the study finding, board independence is shown to have a significant positive effect on financial performance. Thus the study concludes that more non-executive directors in the BOD results in increase in firm performance therefore supporting the expectations of agency theory. The findings can also be interpreted in relation to the resource dependency theory that views board composition as a resource that increases value of the firm. On the other hand, audit committee was shown to have a significant negative effect to firm performance. According to the guidelines of CMA guidelines 2002, the board should have at least three independent directors. However, theoretically, a pool of decision makers is likely to slow some critical and urgent decisions of a firm due to disagreement by the members considering each member will have different opinion. Also, more members to the independent audit committee may lead to politicization of the committee at the expense of firm performance leading to poor or low registration of performance in the long run. Nevertheless, the theory in part supports the argument that outside directors bring resources to the firm.

In addition to providing support to existing theories, this study has empirically contributed knowledge where most studies present conflicting evidence. However, major challenges still remain on weak corporate governance practices that have seen the firms perform poorly in international comparative rankings of governance and competitiveness. In this regard, this study proposes strong policies on independence of the boards as well as that of the audit committee among firms.

5.4 Policy Recommendations

In Kenya, by law and practice, the board is responsible for overseeing and directing the company and appointing senior management, and has substantial freedom under the law to exercise or delegate that power as it sees fit. The board defines the company's strategy, oversees management and performance, identifies principle risks and opportunities, develops remuneration and staff policy, and reviews internal controls and compliance. Despite existence of firm management and leadership structures, a recent global competitive report ranked Kenya lowly on governance and accountability, competitiveness, and investor protection thus a suggestion of a need for a serious push forward on corporate governance reform.

Boards of directors have a big mandate in day to day affairs of their respective firms/organization. Based on the estimation result, there is a need for the government to consider re-evaluating the boards by emphasising independence so as to generate better outcomes. This should be in tandem with the structures of their day to day running of the operations. If this is done, it may lead to improved performance across the listed firms in the same industry/sector and market environment and even under the same regulatory arrangements. The empirical findings also support stewardship theory as advanced by Davis and Donaldson (1991) who argued that from the theoretical perspective, superior performance of the firm had higher likelihood of having a large proportion of independent directors (managers) in board since these managers have a better appreciation of the business and can therefore make better decisions.

Similarly, the compositions of audit committee need to critically be considered as vital in performance of firms under study. How audit committee is characterised including the number despite CMA authorizing at least three independent members, need to be revised to maintain or lead to growth of the firms. This is due to the regression findings which established not only a significant relationship but also a negative association implying more independent members in the audit committee significantly lower firm performance. This is supported by the stewardship theory which portends that managers are impelled by non-financial motives such as need for achievement and recognition at the expense of the firm. They are mostly motivated intrinsically. This ultimately may lead to financial frauds that have been observed over the last decade in many firms in Kenya including the recent scandal witnessed at Chase bank which left the firm under receivership. This may be an indicator that there is high likelihood that either the audit committee was not efficient in carrying out its responsibilities thus poor performance. There is a need therefore for an exact figure or number of independent audit committee members to carry out their duties at their respective firms with a clear consideration of costs and decision making regarding the performance of the firm(s).

5.5 Areas for further study

This study mainly focused on board characteristics with regard to their potential influence on performance of listed firms in Kenya. Similar studies are required covering firms across East Africa and even showing comparisons with respect to these characteristics. There is also a need for more studies of the same nature utilizing other indicators like political instability and corruption, factors which are more pronounced in Africa continent given weak judicial and social structures.

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Appendix A: Descriptive statistics (Detailed)

Variable		Mean	Std. Dev.	Min	Max	Observations	
roa	overall	.026561	.1501856	-.794	.6157	N =	210
	between		.1239975	-.1852	.4866	n =	42
	within		.0864555	-.512239	.474761	T =	5
tq	overall	.8652936	1.141692	.0003568	5.276637	N =	210
	between		1.068155	.0005327	4.150179	n =	42
	within		.4293515	-.5603678	3.241409	T =	5
roa	overall	.1697929	.1643389	-.695	.8539	N =	210
	between		.1231685	-.115	.4866	n =	42
	within		.1101233	-.5250071	.6663529	T =	5
bdsize	overall	9.004762	2.538691	3	15	N =	210
	between		2.441306	4	14.6	n =	42
	within		.7739787	7.004762	12.00476	T =	5
bdind	overall	5.980952	2.807989	0	14	N =	210
	between		2.683576	0	11.6	n =	42
	within		.9061195	1.980952	8.980952	T =	5
bexp	overall	4.290476	1.281595	2	8	N =	210
	between		1.165866	2	7	n =	42
	within		.5499021	2.290476	6.690476	T =	5
acind	overall	3.514286	.8570605	2	6	N =	210
	between		.8580154	2	6	n =	42
	within		.115746	2.714286	4.314286	T =	5
bddeli	overall	5.704762	3.564642	0	33	N =	210
	between		3.278381	2	19.6	n =	42
	within		1.471256	-5.895238	19.10476	T =	5
wrap	overall	1.266667	1.212113	0	5	N =	210
	between		1.128493	0	3.6	n =	42
	within		.4691436	-.1333333	3.666667	T =	5
fage	overall	57	25.45375	12	113	N =	210
	between		25.66102	14	111	n =	42
	within		1.417593	55	59	T =	5
flev	overall	.477529	.2042131	.05	1.033	N =	210
	between		.1976323	.1512	.8746	n =	42
	within		.0582411	.171329	.805529	T =	5
fsize2	overall	23022.28	35671.45	92.25	222302.3	N =	210
	between		34434.87	107.7634	143496.5	n =	42
	within		10458.79	-29156.51	101828.1	T =	5

Appendix B: Hausman model selection test

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bdsize	-.0008301	.0065761	-.0074062	.0056583
bdind	.0156973	.0076164	.0080809	.0046691
bexp	-.0082765	-.0158268	.0075503	.0064767
D.acind	-.1107208	-.0894295	-.0212912	.0022973
bddeli	.0016423	-.0001203	.0017626	.0024602
wrep	.0020548	.004442	-.0023872	.0104593
fage	-.0113334	-.0004699	-.0108635	.0069928
flev	-.6638528	-.2894738	-.374379	.1382622
fsize2	1.04e-06	5.10e-07	5.27e-07	5.24e-07

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(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 16.64
Prob>chi2 = 0.0341
(V_b-V_B is not positive definite)

Appendix C: Fixed Effects Model without intervening variables

```
Fixed-effects (within) regression               Number of obs      =       168
Group variable: compcode                        Number of groups   =        42

R-sq:  within  = 0.0529                         Obs per group: min =         4
       between = 0.0007                                        avg =       4.0
       overall = 0.0058                                        max =         4

                                                F(6,120)           =      1.12
corr(u_i, Xb)  = -0.2383                        Prob > F           =    0.3563
```

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bdsize	.0007334	.0111504	0.07	0.948	-.0213437	.0228105
bdind	.0165472	.0090704	1.82	0.071	-.0014115	.0345059
bexp	-.0179107	.0138987	-1.29	0.200	-.0454291	.0096077
acind						
D1.	-.0791196	.0650144	-1.22	0.226	-.2078436	.0496045
bddeli	.0005933	.0047992	0.12	0.902	-.0089088	.0100955
wrep	.0019851	.016605	0.12	0.905	-.0308916	.0348617
_cons	.0563018	.1110814	0.51	0.613	-.1636317	.2762354
sigma_u	.13218116					
sigma_e	.09538403					
rho	.65757914	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(41, 120) =     6.72                 Prob > F = 0.0000
```

Appendix D: Listed Companies in the NSE in 2010

1	Kakuzi
2	Rea Vipingo Plantations Ltd
3	Sasini Ltd
4	Accesskenya Ltd
5	Car & General (K)
6	CMC Holdings Ltd
7	Hutchings Biemer Ltd
8	Kenya Airways Ltd
9	Marshalls (E.A.)
10	Nation Media Group
11	Safaricom Ltd
12	ScanGroup
13	Standard Group Ltd
14	TPS Eastern Africa (Serena) Ltd
15	Uchumi Supermarket Ltd
16	Barclays Bank Ltd
17	Centum Investment Co. Ltd
18	CFC Stanbic Holdings Ltd
19	Diamond Trust Bank Kenya Ltd
20	Equity Bank Ltd Ord
21	Housing Finance Co Ltd
22	Jubilee Holdings Ltd
23	Kenya Commercial Bank Ltd
24	Kenya Re-Insurance Corporation Ltd

25	National Bank of Kenya Ltd
26	NIC Bank Ltd
27	Olympia Capital Holdings ltd
28	Pan Africa Insurance Holdings Ltd
29	Standard Chartered Bank Ltd
30	Co-operative Bank of Kenya
31	Athi River Mining
32	B.O.C Kenya Ltd
33	Bamburi Cement Ltd
34	British American Tobacco Kenya Ltd
35	Carbacid Investments Ltd
36	Crown Berger Ltd
37	E.A.Cables Ltd
38	E.A.Portland Cement Ltd
39	East African Breweries Ltd
40	Eveready East Africa Ltd
41	KenGen Ltd.
42	Kenya Oil Co Ltd
43	Kenya Power & Lighting Ltd
44	Mumias Sugar Co. Ltd
45	Sameer Africa Ltd
46	Total Kenya Ltd
47	Unga Group Ltd
48	A.Baumann & Co.Ltd
49	City Trust Ltd
50	Eaagads Ltd

51	Express Ltd
52	Williamson Tea Kenya Ltd
53	Kapchorua Tea Co. Ltd
54	Kenya Orchards Ltd
55	Limuru Tea Co. Ltd

Appendix E: Statistical Averages of Board Characteristics

Company Code	Company	BDSize	BDInd	BExp	ACInd	BDDeli	WRep	Firm Age(2014)	FLev	Fsize ("000)	ROA
1	Kakuzi	6	2	4	25%	4	0	108	25%	1921652	2%
2	Limuru tea	4	0	3	50%	4	0	89	24%	1077633.4	27%
3	Rea vipingo	5	3	3	33%	2	0	75	31%	2279931.8	15%
4	Sasini	8	3	6	25%	4	1	62	27%	2672784.4	6%
5	Sameer africa	8	7	6	25%	4	0	45	30%	3782147.8	6%
6	Barclays	9	6	6	100%	7	3	100	37%	27908400	5%
7	CFC stanbic	11	8	8	100%	5	3	25	45%	6679363.6	2%
8	Car and General	7	3	5	100%	4	0	75	63%	6386307.6	5%
9	Housing Finance	9	8	8	100%	5	1	49	21%	2776141.6	2%
10	KCB	11	7	8	85%	12	3	91	79%	44977287	3%
11	NBK	10	7	6	100%	20	2	50	50%	8191678.2	2%
12	NIC Bank	9	7	6	100%	8	0	55	26%	8473462.4	3%
13	Standard Chartered	9	4	7	100%	7	3	60	55%	19898427	4%
14	Equity Bank	11	8	9	100%	6	1	20	71%	21513200	18%
15	Coop Bank	12	11	7	100%	6	1	50	61%	15330400	4%
16	KQ	11	8	7	50%	5	1	55	81%	101752600	-8%
17	NMG	15	12	9	100%	5	4	60	30%	11984020	37%
18	Standard Group	7	3	8	92%	5	1	113	50%	3899923.2	9%
19	TPS Eastern Africa	11	9	5	40%	5	0	44	37%	4888321.4	5%
20	Scangroup Ltd	7	3	4	100%	4	0	26	43%	3765930.2	9%
21	Diamond Trust	8	8	3	100%	4	1	69	30%	12086	3%

										852	
22	Athi River Mining	9	4	6	72%	3	1	40	72%	10693 725	7%
23	Bamburi Cement Ltd	11	8	7	100%	4	2	44	29%	34281 400	16%
24	Crown Berger Ltd	6	3	3	100%	4	0	56	55%	45105 93.4	10%
25	E.A.Cables Ltd	8	6	5	100%	6	1	39	55%	44956 04	11%
26	KenolKobil Ltd	6	4	3	100%	4	1	55	73%	14349 6494	0%
27	Total Kenya Ltd	8	3	4	100%	4	1	23	62%	12598 7528	9%
28	KenGen Ltd	13	9	8	100%	10	3	16	59%	16076 377	2%
29	Kenya Power & Lighting Co	11	8	8	86%	14	2	60	63%	87806 139	2%
30	Jubilee Holdings Ltd	9	4	6	80%	3	0	77	25%	15416 754	5%
31	Pan Africa Insurance Holdings	9	5	6	83%	4	2	68	87%	67464 04.4	31%
32	Kenya Re-Insurance Corporation Ltd	10	9	6	100%	10	2	44	73%	10186 489	11%
33	BOC Kenya	7	5	5	100%	4	1	45	25%	12389 16.4	8%
34	E.A Portland Cement	8	6	4	75%	3	0	89	58%	92715 45	0%
35	Centum Investment Co Ltd	9	4	5	100%	7	1	47	16%	26721 71.6	32%
36	British American Tobacco Kenya	10	8	7	100%	5	1	49	47%	18747 400	49%
37	Carbacid Investments Ltd	4	4	3	25%	5	0	53	15%	77942 4.8	28%
38	East African Breweries Ltd	12	5	7	78%	5	2	92	77%	57038 342	23%
39	Mumias Sugar Co. Ltd	12	11	6	100%	4	3	43	45%	14397 892	0%
40	Unga Group Ltd	8	4	3	40%	4	2	87	39%	14571 996	8%
41	Eveready East Africa Ltd	5	4	3	75%	4	0	113	69%	14059 20	-19%

42	Safaricom Ltd	12	7	7	100%	5	4	17	37%	75838 000	15%