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# **Corporate Governance Effects on Financial Performance of Top 100 Small and Medium Enterprises in Kenya**

**Simiyu Tonny**



**CORPORATE GOVERNANCE EFFECTS ON FINANCIAL  
PERFORMANCE OF TOP 100 SMALL AND MEDIUM  
ENTERPRISES IN KENYA**

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**122736**

**Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Commerce at Strathmore University**



**Strathmore Business School**

**Strathmore University**

**Nairobi, Kenya**

**August 2022**

## 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 thesis 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 main objective of this research was to establish the effects of corporate governance on financial performance of top 100 SMEs in Kenya. Specific objectives included analyzing background information on top 100 SMEs corporate governance in Kenya, establishing the relationship between board attributes and the financial performance of top 100 SMEs in Kenya and establishing management view on the relationship among top 100 SMEs in Kenya. The dependent variable (financial performance) was measured by return on asset ratio (ROA). Independent variables included board size measured by the number of directors, board gender diversity measured by the number of female directors in the board and directors' age measured by the biological age of the directors. This research was grounded on agency theory and resource dependence theory, adopted positivism research philosophy and applied correlational research design. Primary data was collected by way of structured questionnaires. Likert scale was used in the questionnaires. Stata software version 13 was used to analyze panel data with the application of Hausman test that determined the adoption of Fixed Effects Model after returning 3.79% p-value. Data was collected for a period of five years (2015-2019). The population was 260 with a sample size of 158 top 100 SMEs. The study adopted purposive sampling technique. The diagnostic tests carried out include normality, multi-collinearity, autocorrelation, stationarity, heteroscedasticity, misspecification and reliability tests. A total of twenty-two companies responded from a total of one hundred questionnaires that were submitted reflecting 22% response rate. The independent variables influenced the dependent variable by 19.02%. Director's age and board size influenced ROA negatively while female directorship influenced ROA positively. On management view, 59% of the respondents believed functional boards improved their financial performance, 45% believed that large boards improved their financial performance and 51% believed that female directors did not improve their financial performance. Recommendations were for SMEs to establish a policy on gender composition as well as the limit on directors age, a similar study could be done but with a higher sample size as well as with more board attributes as variables for a longer period of time probably more than five years. The researcher also recommends for the organizers of top 100 SME challenge (Nation Media Group and KPMG) to encourage these top 100 SMEs to support students and other research organizations on research matters.

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## LIST OF ABBREVIATIONS

ROA- Return on Assets.

ROE- Return on Equity

SMEs- Small and Medium Enterprises.

MSMEs- Micro, Small and Medium Enterprises.

CMA- Capital Markets Authority

NSE- Nairobi Securities Exchange

GEMs- Growth Enterprise Market Segment

MFI- Micro Finance Institution

UET-Upper Echelons Theory

Ramsey RESET-Ramsey Regression Equation Specification Error Test

BLUE- Best Linear Unbiased Estimator

MSEA- Micro and Small Enterprises Authority

VIF-Variance Inflation Factors

RDT-Resource Dependence Theory

ESG-Environmental, Social and Governance

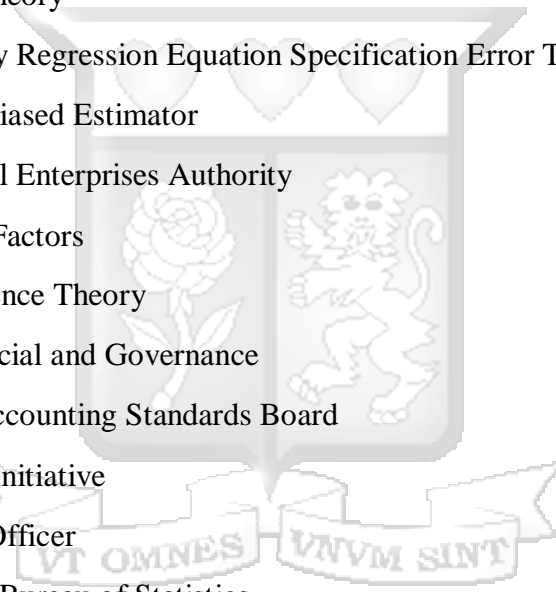
SASB- Sustainability Accounting Standards Board

GRI- Global Reporting Initiative

CEO- Chief Executive Officer

KNBS- Kenya National Bureau of Statistics

NACOSTI-National Commission of Science and Technology Innovation



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## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background to the Study**

Corporate governance refers to the process and structure used to direct and manage the business and affairs of a company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long-term shareholder value, whilst taking account of the interests of other stakeholders (The Code of Corporate Governance Practices for Issuers of Securities to the Public, 2015).

Corporate governance development is attributed to the work of Berle and Means in the year 1932 who emphasized that corporate governance was about separation of ownership and management of companies (Dumbu, 2018). Berle and Means argued that relationships that exist between legal owners and managers of companies required a perfect fit. This perfect fit led to the need for developing corporate governance that directs how companies are governed in order to limit the risk of business failure and enterprise resource abuse (Dumbu, 2018).

In the United States (US), corporate governance was reformed when the U.S. congress passed a legislative reform law called the Sarbanes Oxley Act of 2002 (Sox). Before Sox, legal systems of Anglo-Saxon based on common law were applied compared to civil law in the continental Europe (Sorensen & Miller, 2017). Sox increased oversight over US companies financial reporting and public auditing where the Act formalized and strengthened the governing rules of organizations in terms of financial statement disclosure (Herz & McGurr, 2006). The tides of corporate fraud in the U.S. in the 1990's were attributed to lack of corporate governance. The 2008-2009 global financial crisis escalated the failures of Lehman brothers and subprime mortgage problems which revived interest on the role of corporate governance in the U.S. Strong corporate governance framework protects shareholders, boosts investor confidence and attracts foreign direct investment (Dibra, 2016). The U.S. companies are mandated to adhere to the Sox Act and to ensure board of directors adhere to the best practices of corporate governance guidelines (Kyerere & Ausloos, 2021).

The United Kingdom (UK) adopts an Anglo-Saxon or outsider-dominated system of corporate governance in which ownership of corporate equity is dispersed amongst a vast number of outside investors/shareholders. In this type of system, large firms are controlled by managers/directors (agents) but owned predominantly by outside shareholders (principals).

Such a system of corporate governance faces agency problems (Jensen & Meckling 1976; Shleifer & Vishny, 1999); Bonazzi & Islam, 2007) because of the separation of ownership from control. This system is also prone to hostile takeovers (Weisbach, 1993; Sullivan & Wong, 2005), which act as a mechanism for disciplining company management. Although ownership is dispersed, the large range of shareholders, which are often institutional investors, exercise some degree of control over management. Investors enjoy strong protection in company law, and this system of corporate governance has potential for shareholder democracy (Enriques & Volpin, 2007). According to Puni & Anlesinya (2020), the Cadbury report was the first version of the UK Corporate Governance Code which was published in 1992 by the Cadbury Committee to govern corporate Governance in the United Kingdom. Over the years the Code has been revised and expanded to take account of the increasing demands on the UK's corporate governance framework.

Corporate governance in South Africa began with the publication of the King's Committee Report (King I) on corporate governance in 1994. Subsequently, two more reports were released in 2002 and 2009. In 1993 with the objective of attracting international capital, the South African Institute of Chartered Accountants embarked on a harmonization and improvement project for aligning with International Accounting Standards. The evolution of the series of King's reports has placed South Africa on the global map of corporate governance as far as aspiration is concerned. Apart from global accolades for King, the status of corporate governance in South Africa, especially its implications for investor protection, is held in high esteem (Nag,2015).

Globally, corporate governance has evolved from just board room matters to different aspects that are affecting the world. For instance, Environmental, Social and Governance (ESG) has become a major factor in the modern corporate world. Corporate social responsibility (CSR) is the voluntary commitment of corporates to exceed the implications of their obligations explicitly and implicitly imposed over the company by the society's expectation of a conventional behavior of corporates towards society. CSR is the initiative taken by an organization to be liable towards the social of its effects on it and the environment. CSR is also referred to as corporate citizenship (Bishnoi, 2016). CSR involves monetary outlays/ costs that do not benefit a firm immediately in a financial manner but promotes the goodwill and positive social value and creates environmental change. Charity and

philanthropy are the major drivers of CSR. Many companies have set up a separate department to take up CSR activities which are in turn merged with organization's business processes or business model. CSR incorporates the balance among stakeholders' interests, customers, suppliers, management, and the community (Hakimah, Pratama, Fitri, & Ganatri, 2019; Madrid & Wilkins, 2021; Deloitte, 2015). ESG has also resulted in green financing where bonds are issued to support environmental friendly projects (Sjåfjell, 2018). The widespread global effort to identify and report ESG activities and risks has resulted into proliferation of the reporting standards where many investors have preferred standards of Sustainability Accounting Standards Board (SASB) and Global Reporting Initiative (GRI). Sustainability reporting now dictates sustainability disclosure in order to create a comprehensive corporate reporting (O'Kelley et al., 2021).

Another trend in corporate governance has been managing climate change which has gained traction in organizations that had earlier resisted the move. There are commitments to zero carbon emission by the year 2050. Many organizations like the motor vehicle and airline industries are keen to minimize their harmful activities that contribute to the climate damage. Other organizations that are spearheading the climate change include the United Nations and the G7 countries (O'Kelley et al., 2021). Since the emergence of the Covid 19 pandemic, virtual meetings have replaced in person meetings. Companies are now exploring how to permanently leverage the efficiencies associated with post covid pandemic. Other companies are now having hybrid meetings which comprises of in person and virtual meetings at the same time (O'Kelley et al., 2021).

According to Sacristán-Navarro & Cabeza-García (2019), corporate governance helps family businesses in making strategic decisions and solving specific family problems like succession process, stock valuation and sorting of family issues. These problems can only be reduced or minimized if the right corporate governance mechanisms are put in place. Corporate governance allows firms to prepare for their future expansion and sustainability growth (Dube et al., 2011). Corporate governance plays a big role in a company's sustainability and competitive advantage (Puni & Anlesinya, 2020b). The success of family firms depends on the firm's structure, its processes and the existence of effective corporate governance mechanisms like board of directors, family meetings, family councils and family constitutions (Sacristán-Navarro & Cabeza-García, 2019). Family businesses that have

established a family constitution or protocols have significantly improved performance within two years of implementation and they continue to thrive even in later generations (Sacristán-Navarro & Cabeza-García, 2019). Relevant ownership structures help in solving stock valuations especially for unlisted companies. Corporate governance leads to better financial performance of a company Puni & Anlesinya, (2020b), good performance improves SMEs chances of getting loans from banks, venture capitalists and investors (Dube et al., 2011). Proper bookkeeping and accounting practices boosts confidence in the company by making the firm less risky to finance or invest in (Dube et al., 2011).

According to Sacristán-Navarro & Cabeza-García (2019), boards have powers that influence decisions, strategies and firm performance as a result of being the ultimate governance authority in an organization. Only one third of family firms are handed over to the second generation successfully and barely 10 percent continue to the third generation. New family businesses are started in a great variety of industries but only a few remain successful from one generation to another.

Companies that attach great importance to corporate governance could show higher shareholder value because of higher cash flows and reduced cost of capital (Aktan et al., 2018). Companies with weak corporate governance structures cannot guarantee shareholders sustainable wealth creation as the mechanisms of corporate governance will be inadequate to hold executives accountable for their stewardship (Aktan et al., 2018). External supervisory by third parties makes the firms to be committed to business efficiency but lack of professional management increases insolvency in SMEs (Dube et al., 2011). Once corporate governance mechanisms are absent, inadequate outside investors are likely to direct their equity funds to other firms that have sufficient corporate governance structures to secure shareholders wealth (Aktan et al., 2018). Firms performance can be enhanced and assured if there are corporate governance mechanisms to minimize agency conflicts (Aktan et al., 2018).

Small and Medium Enterprises have been defined differently in different jurisdictions. Typically, SMEs are described based on the number of employees and revenue thresholds generated by the SMEs (*SME Governance Guidebook (2019)*).

A medium enterprise is described by The Public Finance Management Amendment Bill (2020) as a firm whose annual turnover does not exceed one hundred million shillings while employees' range between fifty-one and two hundred and fifty. The Bill

further explains a medium enterprise in the manufacturing sector as an investment in plant and machinery or registered capital of the enterprise that does not exceed two hundred and fifty million shillings. In the service sector, the bill defines a medium enterprise as an investment in equipment or registered capital of the enterprise does not exceed one hundred and twenty-five million shillings.

A small enterprise is described by The Micro and Small Enterprise Act (2012) as a firm whose annual turnover ranges between half a million and five million shillings, employs staff between ten and fifty. The Act further describes entities in the manufacturing sector as an investment in plant and machinery or the registered capital of the enterprise between ten million and fifty million shillings. The Act describes firms in the service and farming enterprises as investment in equipment as well as registered capital of the enterprise that lies between five and twenty million shillings.

According to the Micro, Small and Medium Establishments Basic Report (2016) conducted by the Kenya National Bureau of Statistics, MSMEs sector engaged about 14.9 million persons in the year 2015. This implies that the highest employment opportunities in Kenya are provided by the MSMEs sector. The report further revealed that MSMEs sector contributed 33.8 percent to the national economy in 2015. This report further found out that MSMEs played an important role in the economy by increasing competition, fostering innovation, generating employment, and acting as a source of goods and services. SME's also contributed 34 percent of GDP in 2016 (Intracen, 2019).

During the year 2018, SMEs created 840.6 thousand new jobs mostly in the informal sector (Kenya SME Performance Index, 2019). Many of the jobs in Kenya are in the SME's that accounts for 83.6% of the employment opportunities that were created in 2018 and contributed 34% of GDP in the same year 2018 (Kenya SME Performance Index, 2019). SME's in Kenya provide employment to more than 80 percent of the Kenyan population and they represent 98 percent of all businesses (Intracen, 2019). SME's play an important role in the economy by providing employment, reducing poverty, innovation, economic inclusion as well as economic empowerment (Intracen, 2019).

The economic survey 2020 conducted by the Kenya National Bureau of Statistics revealed that the formal and informal sectors in Kenya in the year 2019 provided 78,400 and 67,900 jobs respectively. In Kenya, corporate governance is governed by the Code of corporate

governance practices for issuers of securities to the public 2015 and the Corporate governance for market intermediaries 2011 (CMA & KNBS, 2020). These codes were issued by The Capital Markets Authority (CMA) to govern listed and unlisted companies in Kenya. However, it is only listed companies that are monitored by CMA and Nairobi Securities Exchange (NSE) but unlisted companies are not. The code stipulates the best practices that companies (listed and unlisted) adhere to in order to ensure corporate governance practices are embraced (CMA & KNBS, 2020). SMEs in Kenya have no clear legislation. The Micro and Small Enterprises Authority that falls under the Ministry of Industrialization, Trade and Enterprise Development was established to register associations or umbrella organizations that fall under micro and small businesses (The Micro and Small Enterprise Act, 2012).

A big percentage of Kenyan businesses are SMEs. Majority of the businesses do not practice good corporate governance, and many are not even aware what the concept is. It seems like an intimidating prospect for small businesses especially those which are not incorporated as limited liability companies. This is a misconception as corporate governance is important for every business even the small ones. In fact, good corporate governance is one of the key drivers of organizational growth (Mwangi, 2016). Small businesses that have sound governance practices are more likely to experience growth as opposed to those that do not have any governance. Faced with a choice between two investment prospects, an investor is most likely to invest in a business with good governance as opposed to a one with average governance. (Business Daily, 2018).

Across the world over, Small and Medium-sized Enterprises (SMEs) are recognized as the vehicles through which global economies are built. They provide the entrepreneurial vibrancy and vitality that drives economic activities across different industries. In developing countries, SMEs are important because of their role in economic growth and poverty reduction (Zone, Town, & Oynaka, 2020).

Few studies have been done on corporate governance and the performance of Top 100 SMEs in Kenya. For instance, Wachudi & Mboya, (2009) studied the effect of board gender diversity on the performance of commercial banks in Kenya. The study found out that boards of commercial banks in Kenya were male dominated. The results revealed that board diversity had no effect on the performance of commercial banks in Kenya. Kenyana & Mule, (2017) studied board composition and value-added performance of firms listed at the Nairobi

Securities Exchange (NSE) with financial leverage as the mediating variable. The study concluded that board gender diversity and board size were positive predictors of value added performance. Kenga & Nzulwa (2018.) studied the role of corporate governance practices on firm performance of medium sized enterprises in Kilifi county, Kenya. The study focused on board size, board composition, board skills and CEO duality. The study found out that board size had a significance on firm performance of MSEs in Kilifi county. Afande & Uk, (2015) studied adoption of corporate governance practices and financial performance of SMEs in Kenya. The variables included availability of board of directors; existence of a system of evaluating board and individual directors; existence of Bylaws to govern board meetings; and use of cumulative voting for elections of directors. The findings were a positive relationship between corporate governance practices and profitability of SMEs.

Listed companies in Kenya are governed by the Code of Corporate Governance for Issuers of Securities to the Public 2015 which must be adhered to by all listed companies. The trading platform is the Nairobi Securities Exchange (NSE) which is regulated by the Capital Markets Authority (CMA). NSE supports Growth Enterprise Market Segment (GEMS) companies which are SMEs and enables these GEMS firms to raise substantial capital and accelerate their growth within a regulatory environment designed specifically to meet their needs. The segment offers companies flexible listing requirements in recognition of the company's growth phase. Companies that are in the top 100 can apply for GEMs consideration. The Growth Enterprise Market Segment (GEMS) is a segment for Small and Medium Sized Companies ( Growth Enterprise Market Segment. (2022, August 7).

Corporate Governance for SMEs differs from corporate governance for listed companies since for listed companies' corporate governance is mandatory e.g., audit committee, Non-Executive Directors (NED), company secretary. For SMEs, one third of NED is assumed as dilution of ownership which many SME owners always deny (Nairobi Securities Exchange Website). Founded in 2008, the Kenya Top 100 mid-sized companies Survey (Top 100 Survey) is an initiative of KPMG and Nation Media Group. The survey seeks to identify Kenya's fastest-growing medium sized companies to showcase business excellence and highlight some of the country's most successful entrepreneurship stories The Top100 Mid-Sized Companies are selected from all participating companies on the basis of their revenue growth over the past three years, profits, liquidity and other measures of financial solidity. In

order to qualify for the Top100 Mid-Sized Companies, a company must meet the following criteria: should have a four-year average turnover of KShs 50 million to KShs 1billion, have four year audited financial records, not listed in the Nairobi Securities Exchange. Banks, professional services firms (such as law, accounting, and audit firms), SACCOS, and insurance companies are excluded from participating. A company cannot participate in the top 100 competition if it had been recognized as a Club 101 company before. Over one thousand SMEs submitted to participate in the top 100 SME challenge in the year 2015 while over eight hundred submitted to participate in the year 2018. These SMEs figures that submitted to participate represent the SMEs sector at large even though only 100 were listed ( About Top 100 SME. (2022, August 7).

The 2010 Constitution, the 2015 Company's Act and the 2015 Insolvency Act are some of the changes in legislation that warranted this study. The 2010 constitution advocated for one third female representation. The female representation prompts the study of female directors at the board level and how the one third female representation has been implemented. The 2015 Company's Act ratified the minimum directors of a private company to one. Again this 2015 Company's Act motivated the researcher to pursue board size as one of the variables. The 2015 company's Act also relaxed the mandatory requirement of having a company secretary for private companies.

## **1.2 Problem Definition**

According to The Micro, Small & Medium Establishments Basic Survey Report (2016) conducted by the Kenya National Bureau of Statistics, a total of 2.2 million Micro, Small and Medium Enterprises (MSMEs) closed shop in the period of five years (2012-2016) (Zamrodah, 2016). According to the Kenya Association of Manufacturers (2021), SMEs development is crucial. For SMEs to thrive, governance challenges must be addressed. The contribution of SMEs in a driving economy has been hampered by governance related issues and the adoption of corporate governance practices among SMEs has been a challenge due to the fear factor of unknown costs incurred in the adoption of the practices.

According to Biashara Now (2019), the main underlying constraint in the growth of SMEs is lack of corporate governance structures. The findings cited low corporate governance being one of the major challenges SMEs encountered despite a good number of them having boards in place. It is believed that factors that influence financial performance on SMEs

vary depending on poor record keeping, inefficient use of accounting information, poor/careless financial management, low quality and reliability of financial data, poor asset quality, poor governance, poor profitability and poor liquidity (Zone, Town, & Oynaka, 2020). Umrani, Johl, & Ibrahim (2015) explain that the failure of many SMEs is because of poor corporate governance practices. The problems of corporate governance have an adverse effect on corporate practices in SMEs due to corporate governance problems, most SMEs fail.

According to the CMA & KNBS (2020), SMEs competitiveness could be improved by way of adopting corporate governance practices that assures sound management and strategic practices that can steer SME growth through competitive advantages that are gained by eliminating poor management practices that leads to losses and imminent failure. The survey noted further that for the years 2017,2018 and 2019, 67 percent of the firms indicated that they recorded profits in 2017 while the proportion of profitable firms was 69 percent in 2018 and 63 percent in 2019. The survey also indicated that 17.6 percent of the SMEs did not have an appropriate governance framework, 24.5 percent revealed that governance requirements were cumbersome while 19.6 percent said that the requirements were not relevant to the SMEs. 55.3 percent of the SMEs revealed that they were not aware of the Capital Markets Authority corporate governance practices for issuers of securities to the public.

Corporate finance and major scandals in management have been in the news concerning WorldCom and Enron in the United States, in Nigeria Cadbury Plc had overstated its share price and in Malaysia, Megan Media Holding was involved in financial fraud after it was discovered they made up transactions in their accounts (Narasimhan, 2019). All these scandals have been blamed on corporate governance. As a result of these scandals, there has been developments in the area of corporate governance codes in order to compel firms to function properly (Adedeji, Ong, Uzir, & Abdul Hamid, 2020).

This study considered corporate governance and the performance of Top 100 SMEs in the context of Kenya by investigating the relationship between corporate governance variables and the financial performance of Top 100 SMEs.

### **1.3 Research Objectives**

#### **1.3.1 General Objective**

The general objective of this research is to study corporate governance effects on financial performance of top 100 small and medium enterprises in Kenya.

### **1.3.2 Specific Objectives**

- i. To analyze board attributes of top 100 SMEs in Kenya.
- ii. To establish the relationship between board attributes and the financial performance of top 100 SMEs in Kenya.
- iii. To establish the management view on the relationship between corporate governance and the financial performance of top 100 SMEs in Kenya.

### **1.4 Research Questions**

- i. What are the corporate governance attributes on top 100 SMEs in Kenya?
- ii. What is the relationship between board attributes and the financial performance of top 100 SMEs in Kenya?
- iii. What is the management's view on the relationship between corporate governance and the financial performance of top 100 SMEs in Kenya?

### **1.5 Scope of the Study**

This study focused on corporate governance effects on financial performance of top 100 small and medium enterprises in Kenya. The study period was five years (2015-2019). The researcher focused on top 100 SMEs because the business register in Kenya as well as the Micro and Small Enterprises did not have a list of SMEs. Lack of data for SMEs (names) from business register as well as the Micro and Small Enterprises Authority prompted the researcher to focus on top 100 SMEs since the names of the SMEs are listed thus identified with ease. The population was 260 SMEs with a sample size of one hundred and fifty-eight (158) top 100 SMEs.

### **1.6 Significance of the Study**

This research helps in bringing out the understanding of corporate governance effects on financial performance of top 100 small and medium enterprises in Kenya to the following beneficiaries:

#### **1.6.1 Academicians and Researchers**

The academic world should consider the enormous potential of this strategic intersection. The study makes a significant contribution to the growing body of research on support of adoption of corporate governance by SMEs after changes in legislation like the 2010 constitution, the Companies Act of 2015 as well as the Insolvency Act of 2015. The findings may also be used as a source of reference for other researchers. In addition, academic

researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further research.

#### **1.6.2 SME Owners and Managers**

This research will help SME owners and managers to understand the importance of adopting corporate governance within their companies. The understanding will be because of the benefits that arise as a result of implementing corporate governance practices.

#### **1.6.3 Policy Makers (Government) Especially for Vision 2030 Realization**

The SMEs policy makers will acquire insight into the critical areas of support amongst SMEs that would facilitate adoption of effective corporate governance practices for enhanced performance. The study will also help the government in policy formulation on how corporate governance for SMEs can be formulated.

#### **1.6.4 The Micro and Small Enterprises Authority (MSEA)**

This study will help MSEA in developing policies that govern the SMEs in Kenya. The policies will include corporate governance disclosure.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents a review of literature on the relationship between corporate governance and the performance of SME's. The chapter begins with theoretical review that highlights the theories related to corporate governance, followed by empirical review that presents a review of prior studies done on the relationship between corporate governance and the performance of SME's, research gaps, conceptual framework, definition of variables and operationalization of variables. The research gap outlines various gaps in the empirical literature while the conceptual framework presents the hypothesized relations between various independent variables of corporate governance and the dependent variable of performance. This chapter involves four sections, section 2.2 theoretical literature, section 2.3 empirical literature, section 2.4 conceptual framework and section 2.5-chapter summary and research gaps.

### **2.2 Theoretical Literature**

#### **2.2.1 Agency Theory**

The developers of this theory were Jensen & Meckling (1976). The theory explains the correlation that exists when one party the principal (shareholders) appoints/ delegates decision making authority function to another party agent (managers) to make decisions on the principal's behalf. This theory is about separation of ownership and control between principals and agents. The theory explains that when decision making authority is delegated, this can lead to loss of efficiency and consequent costs where any loss of profit or value because of agent's underperformance is called agency cost. The theory further explains that agents will act in an opportunistic manner to the extent that their actions will increase their wealth because of agent's opportunistic behavior and selfishness. The theory stipulates that principals seek to put in place mechanisms that align manager's interests and those of the owners by including output of accounting system in their contract where they are given a share of the profits. Principals always stipulate objectives that managers are required to pursue. Managers are not always able to achieve the stipulated objectives because of their non-rational opportunistic behavior (selfish interest) that always leads to conflicts of interest between principals and agents despite the principal expecting the agents to act in their best interest. For these conflicts to be managed, principals are forced to incur agency costs like monitoring expenses that include preparation

of financial statements or bonding expenses that involve audit of financial statements because of the separation that occurred on control and management of a company and residual costs. Agency theory is a very important theory when managing a company's finances even though it is pegged mostly on managers' ethical behavior in managing an organization. This theory helps in explaining why debt is used to finance a firm even without considering the tax shield benefit. It is believed that principals go for debts so as to keep agents (managers) on toes. The developers of this theory argued that an ownership structure that is optimal relies on the tradeoff between equity and debt agency costs.

It is believed that managers sometimes pursue their own interests at the expense of the principals' interest in order to enrich themselves. The selfish interest could include investing in risky projects if the principals are risk averse, wealth maximization or profit maximization. This could lead to agency costs like, monitoring, bonding, or residual costs. This theory (agency) is linked to this research topic in the sense that in corporate governance, directors always assume the role of a delegated authority to supervise managers so as to ensure shareholders goals are achieved.

Control mechanisms that are put in place to monitor the agents are expensive. These control mechanisms involve incurring monitoring costs like appointing external auditors and a supervisory board to monitor the agents. Appointing the supervisory board involves incurring costs in terms of their allowances and other emoluments that compensate directors. In addition, the costs incurred in compensating the supervisory board may lead to a firm appointing fewer directors (small board size) to keep the costs low as opposed to appointing a larger board. Sometimes the board may be split on decision making thus hindering their role in monitoring agents. Shirking of board of directors may also interfere with their role of monitoring agents. Supervisory board enhances checks and balances thus boosting performance of a company. Proponents of agency theory advocate for the separation of the role of CEO and board chairman so as to enhance checks and balances (Kyere & Ausloos, 2021);Wan Yusoff, 2012)

### **2.2.2 Resource Dependence Theory**

Resource Dependence Theory (RDT) was developed by Jeffrey Pfeffer and Gerald R. Salancik in the year 1970. RDT is pegged on the idea that resources are key to organizational success and that access and control over resources is a basis of power. RDT is concerned with how organizational behaviour is affected by external resources that the organization utilizes such as

raw materials. The theory is important because an organization's ability to gather, alter and exploit raw materials faster than competitors can be fundamental to success. Some commentators encourage organizations to view customers as a resource predisposed to scarcity. Resources are often controlled by organizations not in the control of the organization needing them, meaning that strategies must be carefully considered in order to maintain open access to resources. Organizations typically build redundancy into resource acquisition in order to reduce their reliance on single sources e.g., by liaising with multiple suppliers. Non-executive directors bring in additional individual capabilities that determine organizational success e.g., personal motivation and rational use of resources. Non-executive directors are one of those organizational resources that helps a company to gain a competitive advantage as they help the organization to link up with other organizations. The link to other organizations could be access to key raw materials (suppliers), customers or help in completing certain key transactions that are vital to a company's operations. RDT is based on the principle that an organization such as a business firm must engage in transactions with other actors and organizations in its environment in order to acquire resources. Acquiring key resources is advantageous to an organization. Human resources is part of the key resources/ capabilities that organizations should have (Wan Yusoff, 2012).

### **2.3 Empirical Literature**

This section presents a review of prior studies done on the relationship between corporate governance and the performance of firms. The section presents the review in three parts as follows: 2.3.1.1 the relationship between gender and the performance of SMEs, 2.3.1.2 the relationship between age and the performance of SMEs and 2.3.1.3 the relationship between board size and the performance of SMEs.

#### **2.3.1 Analysis of Corporate Governance Information on Top 100 SMEs in Kenya.**

Background information regarding SMEs in Kenya is scanty due to the fact that SMEs are unregulated and that they are not mandated to disclose information like financial information, book-keeping, or any other information. According to the Micro, Small and Medium Establishments basic report 2016, there are 1,560,528 registered Small and Medium Enterprises in Kenya as per the Micro, Small and Medium Establishments Basic Report 2016 from the Kenya National Bureau of Statistics. Registered Micro SMEs were 1,438,109, Small were 110,938 and medium were 11,480. Statistics by the Micro, Small and Medium

Establishments Basic Report 2016 indicate that there are over 7.4 million MSME in Kenya but only 1,560,528 are registered. SMEs in Kenya have boards. Out of the 260 SMEs under this study, only 52 SMEs had corporate governance information displayed on their websites. A total of 105 SMEs had websites but did not have corporate governance information on their websites but had vision, mission and core values displayed. This highlights the issue of non-disclosure of these companies' information. Only one SME in the financial services sector had displayed its financial statements on the website. One SME had a chairman who is same as the CEO. This highlighted the concept of CEO duality in this SME company. A total of 41 companies did not have websites thus could not be reached. 26 SMEs had a supervisory board with a total of 87 directors. On average these SMEs have 4 directors in the supervisory board. These 26 SMEs has a total of 21 female directors. This implies that in the supervisory board on average each SME has one female director. This indicates that the supervisory board is male dominated.

In the management board, 37 SMEs had a total of 143 managers including CEOs or managing directors. Male managers, CEOs or managing directors were 103 implying that on average each SME had 3 male managers in the management board. These SMEs had 43 female directors implying that on average each SME had 1 female manager. Again, the managerial board is dominated by male managers. 13 SMEs had both supervisory and managerial boards. One company had an organization structure displayed on its website but had not listed the directors on the website.

### **2.3.2 The Relationship Between Board Attributes and the Financial Performance of Top 100 SMEs.**

The Code of corporate governance practices for issuers of securities to the public (2015) stipulates that each board should consider whether its diversity is effective. The code explains diversity to include academic qualifications, technical expertise, relevant industry knowledge, nationality, age, race, and gender. The code further caps the age limit of a board member at seventy years but shareholders at the annual general meeting may vote to retain a board member who is past the age of seventy years. This research focused on board size, gender, and age of directors as the corporate governance variables under board attributes.

### *2.3.2.1 The Relationship Between Board Size and the Financial Performance of SMEs.*

Disparities among practitioners' opinions on the optimal configuration of the board of directors ponders the need to study board size as a key attribute of board characteristics. According to the Code of corporate governance practices for issuers of securities to the public (2015), the board shall be such a number that ensures the requirements of a firm's business are met. The code further explains that the board size should neither be too large to undermine an interactive discussion during board meetings nor too small such that the inclusion of wider expertise and skills to improve board effectiveness and board committee's formation is compromised.

Puni & Anlesinya (2020b) explained that large boards with majority outside directors was correlated with deep intellectual knowledge thus improving decision making and firm performance enhancement. They revealed that large boards lose coordination and experience challenges in communication. They argued that large boards are equipped with adequate human resources that eliminates information asymmetry by thorough scrutiny of financial information hence preventing financial reporting standards breach and frauds. The study further pointed out that large heterogeneous boards could bring in more views that are balanced but could be slow in decision making process due to the longtime required to harmonize different opinions. Puni & Anlesinya (2020a) argued that quick decisions that came from small boards regardless of gender really mattered. They also found out that large boards could become a resource for improving performance of quoted firms. They cautioned that quoted firms must moderate board size since large boards beyond limits could bring challenges like coordination and communication that could hinder effectiveness in corporate success (Puni & Anlesinya, 2020a).

Naseem, Riaz, & Rehman (2017) highlighted that large boards are associated with high costs while small boards can be less effective in monitoring agents. They further highlighted that board size relies on age and size of the company. According to Ali (2018), large boards help companies through connections with external parties like suppliers and business customers. Interlocking directorates (multiple directorships), in large boards can help a firm in securing important contracts as well as valuable advice. Large boards are likely to have interlocking directorates hence this provides evidence that large boards are likely to perform better than small boards. Larger boards are likely to execute their role of monitoring effectively

since more directors are engaged in the monitoring process unlike smaller boards. Enhanced monitoring boosts performance since management (agents) perform better as a result of effective monitoring by the large board. Large boards with directors that have a range of expertise helps the board in executing complex roles in an efficient manner unlike smaller boards that works as an individual group.

Saidat, Silva, & Seaman (2017) revealed that small boards are highly likely to bring better coordination and communication in a company. They further argued that large boards benefit more due to the broader perspective and better route of strategic options for the firm. They also explained that family firms can be reluctant to increase their board size so as to maintain control and facilitate communication when making decisions hence reducing free riding problems. Süsi & Lukason (2019) explained that large boards add competences, relationships, networks, and resources to a company even though they are vulnerable to coalition buildings and power games that can hinder decision making especially in times of a crisis. On the other hand, they further explained that small boards are effective as they improve a company's performance.

Shettima (2018) argued that large boards are less efficient compared to small boards since large boards encourage free riding behavior among board members when executing the monitoring role. Assenga, Aly, & Hussainey (2018) argued that large boards enhance connections among a company and its external environment. They further revealed that from a decision-making process, small boards can boost effective decision making while large boards should provide huge access to resources like capital and expertise from external environment.

Farooque (2019) explained that large boards can lead to poor decision making and communication during the monitoring process. The author further stipulated that having many directors on boards was negatively correlated with a company's performance. The researcher further argued that large boards implied having more experienced directors due to a vast range of experience that can enhance a company's performance.

There has been mixed empirical findings on board size and the performance of firms. Some of the results regarding board size and the performance of SMEs is positive while other results have been negative. A study done by Hakimah, Pratama, Fitri, & Ganatri (2019) on 50 Indonesian SMEs using panel data for a period of five years 2013-2017 revealed that board

size had a significant positive influence on the profitability of SMEs. The study researched on corporate governance and profitability of SMEs in Indonesia. Similar results were reported by Shettima (2018) who conducted a research on 30 Micro finance institutions in Nigeria between 2010-2013 and found out a positive and significant correlation between board size and MFI performance measured by ROA and ROE. The results indicated that large boards translated to good corporate governance practice that led to lower agency costs for MFIs. A census done on firms listed on Bahrain bourse between 2011-2016 revealed that board size had a positive but significant impact on company's ROA. They further found out that having large boards significantly increased firms' performance as board size improved ROA and ROE. This implied that companies in Bahrain with larger boards increased performance. This was attributed to larger boards having experts in different fields that brought experience and expertise on the board table (Aktan et al., 2018). Hakimah et al. (2019) conducted a study in Indonesia on 50 SMEs and found out that board size was significant and positively correlated with profitability. A study done in Ghana for the period 2006-2018 on 38 listed firms found out that board size had a positive impact on a firm's performance (Puni & Anlesinya, 2020a). Mishra (2017) explored the relationship between board characteristics and firm performance in India on 391 companies listed at the National Stock Exchange for the years 2010-2014. The study used Tobin Q and ROA as measures of firm performance. The findings revealed a positive association between board size and company's performance. They explained that an increase in board size leads to a rigid decision-making process or greater monitoring. They explained that large boards led to vast experience and more linkages to the external environment. They also found out that large boards slow the decision-making process. A significant difference was observed among board sizes of smaller and larger firms because of increased monitoring requirements as firms grew in size. Hakimah, Pratama, Fitri, & Ganatri, (2019) conducted a study on 50 samples of Indonesian SMEs between 2013-2017 using panel data and random effects model technique. The study reported that board size had a significant positive influence on profitability of SMEs.

Census research carried out in Estonia on 67,058 SMEs found out that SMEs had a higher failure risk when their board sizes were large and experienced lower failure risk when their board sizes were smaller. They argued that larger boards posed the risk of power games. The research also pointed out that larger boards had little importance in SMEs. In case of large

firms, board size was found to be insignificant. The study used logistic regression and exploratory research design (Süsi & Lukason, 2019).

On the contrary, Palaniappan (2017) investigated the determinants of corporate financial performance relating to board characteristics of corporate governance in Indian manufacturing industry. A negative but significant correlation was found on board size and the performance of 275 manufacturing firms between board size ROE and Tobin Q.

### *2.3.2.2 The Relationship Between Board Gender and the Financial Performance of SMEs.*

Herrera-cano et al.(2019) defines board gender diversity as the proportion of women in boards. Discussions regarding gender equality specifically women participation in top management positions in corporate boards has been on the rise. Women in many cultures have been excluded from top positions. As a result, this female gender exclusion is one of the reasons that explain why there are gender imbalances in corporate boards.

Different authors have researched on board gender and firm performance and have pointed out several advantages of a firm having female directors. Herrera-cano et al.(2019) argued that women have interactive style of management that is linked to the success of management skills, improve quality of decisions, promote innovations and creativity, improve communication, better understanding of consumer demographics, create better corporate image as well as create better competitive advantage for firms. They explained that although female directors in boards had advantages, they also had some bottlenecks that include conflicts in decision making process that results in decisions taking too long to be made. Arora & Singh (2020) explained that the presence of women in boards of directors anticipates positive organizational results. Women eclectic knowledge, innovation, creative skills, consumer market knowledge and intolerance towards unethical behavior strengthens internal controls of a firm that in turn improves performance of companies.

Makropoulos et al. (2020) found out that female directors bring divergent reasoning and motivate other directors to consider a vast range of solutions. They further explained that female directors endorse values that lead to ethical decisions unlike male directors. The importance of female directors was also explained by Assenga, Aly, & Hussainey (2018) who stated that skills and knowledge boost critical thinking that is fundamental in executing directors role of monitoring, providing important resources and advisory. They revealed that directors link with external environment brings diverse knowledge as well as skills to a

company. Shettima (2018) found out that the presence of women directors promotes wider participation thus upholding fairness principle when making decisions. They further explained that women directors contribute to the process of making decisions hence improving shareholder's objective of maximizing wealth.

Studies on the relationship among women and performance of firms in corporate boards of directors are abound. Results on prior studies regarding women and performance of firms is mixed. One group of authors illustrate how women in corporate boards are correlated with increased financial performance whereas other authors report that women in corporate boards impact financial performance negatively. Other researchers reported no correlation between women and firms' performance.

Herrera-cano et al.(2019) studied representation of women in corporate boards of directors and financial performance by analyzing 40 published studies in 28 different countries using systematic review and meta-analysis techniques. The study concluded that there was no significant relationship between the number of women serving in boards of directors and financial performance of companies. Similarly, a census study conducted in Estonia on corporate governance and failure risk evidence from Estonian SME population of 67,058 SMEs indicated that gender heterogeneity was not correlated with SME failure. The study utilized logistic regression and exploratory study design with the results indicating that gender was not associated with failure risk of SMEs. The results of the logit model were significant and the multi-collinearity VIF value was below 2.00. These researchers argued that different perspectives that emerged from both gender representations in boards had little importance in SMEs sector. They pointed out that female directors are likely to be successful in marketing and sales as they bring different experiences and understanding about markets and their consumers. The study found out that gender heterogeneity was an insignificant variable in the study (Süsi & Lukason, 2019).

Consequently, Shehata, Salhin, & El-helaly (2017) conducted a study in the United Kingdom on 34,798 SMEs for the years 2005 through to 2013. The research was on the relationship between board diversity and SME performance in U.K. The results revealed a significant negative association between gender diversity, age diversity and financial performance. The researchers employed four measures as proxies for gender diversity. The four measures that were proxies for gender diversity included: gender, percentage of female

directors, blau index and Shannon index. All the four proxy measures of gender returned a negative correlation with SMEs performance that was measured by return on assets (ROA). A study done by Wachudi & Mboya (2012) on 44 commercial banks in Kenya for the period 1998-2009 revealed a negative correlation between board gender diversity and performance which was also statistically insignificant. The negative and insignificant correlation was also found by Shettima (2018) who conducted a research in Nigeria on 30 MFIs for the period 2010-2013. The empirical results were a negative and insignificant correlation between female directors and MFI performance. Negative results were also reported by Roudaki (2018) who studied agricultural firms in New Zealand and found that board gender diversity was negatively but significantly correlated with performance. The research further revealed that any increase in percentage of women on boards resulted in a decrease of firms' ROA. They found that including women in boards could bring resources to a company like external networking and decision making but emphasized that these resources could take time to be realized (Roudaki, 2018).

Another study by Makropoulos et al. (2020) analyzed the determinants of failure processes in UK SMEs by considering non-financial metrics that included directors characteristics. The results found out that board attributes, firm age, firm growth, economics, and business environment significantly determined failure process of a firm. The researchers utilized panel data using 7041 firm year observations. The study also analyzed the data using factor and cluster analysis. The hypothesis tested rejected the null hypothesis. They explained that it is important to analyze individual failure processes rather than looking at failed companies as a whole. A study done by Hakimah, Pratama, Fitri, & Ganatri (2019) on 50 Indonesian SMEs using panel data for a period of five years 2013-2017 revealed that board gender had a significant positive influence on the profitability of SMEs. The study researched on corporate governance and profitability of SMEs in Indonesia. Minh & Pham (2020) conducted a study on 810 SMEs in Vietnam in the year 2015 on the topic influence of CEO characteristics on corporate environmental performance of SMEs in Vietnam. The study revealed that gender significantly increased profitability of SMEs. The study used cross-sectional data. Further, Hakimah, Pratama, Fitri, & Ganatri (2019) conducted a study on 50 samples of Indonesian SMEs between 2013-2017 using panel data and random effects model

technique. The study reported that board gender diversity had a significant positive influence on profitability of SMEs.

### *2.3.2.3 The Relationship Between Directors' Age and the Financial Performance of SMEs.*

Hashim (2014) studied 325 old workers aged between 55 and 60 years old in the higher education sector in Malaysia. The study revealed that older workers were competent, performed well and were trainable. Alharbi, Yahya, & Ahmed (2018) revealed that middle aged and older managers (40 years and above) were more likely to manage SME growth. They found out that older workers are competent, they perform well and can be trained. The study further explained that older workers' performance was positively associated with their competence and trainability. Older managers bring more experience and knowledge unlike young managers. Afrifa (2013) explained that young CEO's may be risk averse due to their lack of confidence in their executive skills or fear of making mistakes. The study also found out that young CEO's may lack experience, make judgement errors in decision making that can lead to increased costs thus lowering the firm's performance. Minh & Pham (2020) explained that the negative relationship between CEO age and performance can be explained as due to lack of ability by the older CEOs to learn new behavior and acknowledge new ideas and failure by older CEO to make decisions of investing in long term projects. They also cited that older CEO's experienced shortage of physical and mental stamina that eventually affect the performance of a firm negatively. Leighton (2008) conducted a study on 523 SMEs in Nigeria and reported that age influenced the growth of SMEs. They found out that younger owners/ managers were motivated, committed, and had the energy to enable them work. They further revealed that younger managers or owners take risks while older owners or managers ought to have reached their initial inspiration. A research done in Finland by Kautonen (2008) on 839 small firms between 2000-2006 involving entrepreneurs in the age bracket of 50 and above and 20-49 years found out that survival rates of firms started by older entrepreneurs were higher compared to those of young entrepreneurs. The study used chi-square and one way between group analysis of variance tests. Chi-square was used to identify differences among the variables while analysis of variance (ANOVA) tests was used to measure intervals using a seven-point Likert scale.

Hashim (2014) found out that the performance of older workers was positively related to their and trainability. Trainability and competence were found to be correlated with

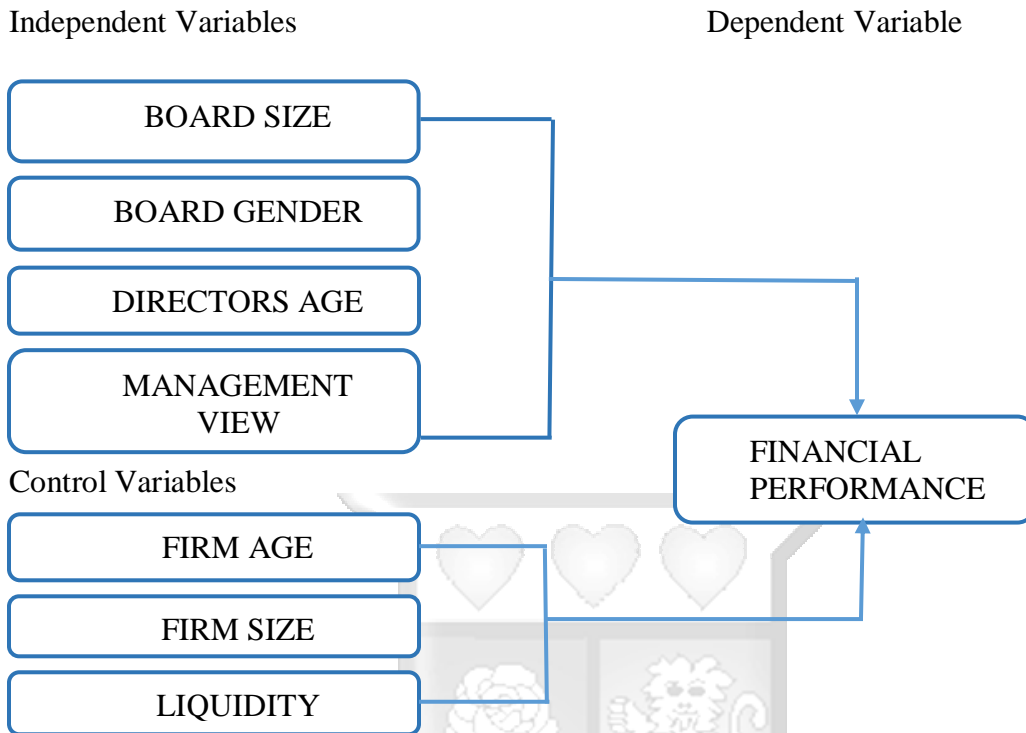
performance. Afrifa (2013) found out a significant and positive association between Q ratio and CEO age. The significant coefficient of medium SMEs implied that the accumulated experience and knowledge of aged CEO impacted performance of SMEs in a positive way. Tanveer, Akbar, Gill, & Ahmed (2017) revealed that age is related to business success positively. Alharbi, Yahya, & Ahmed (2018) found out that age of SME managers impacted SMEs positively. Afrifa (2013) analyzed 234 SMEs for a period of 10 years (2004-2013) using unbalanced panel data regression technique and revealed that CEO age was significantly correlated with SMEs performance. The study further revealed that CEO age was significant in medium sized SMEs only. Horváth & Spirollari (2012) conducted a research on the age of board of directors for the years 2005-2009 involving 136 firms. The study found out that age of board of directors mattered to a certain degree. Young directors were probably willing to take more risk and undertake major structural changes to improve a company's future prospects. On the contrary, Minh & Pham (2020) carried out a study on 810 SMEs in Indonesia for the year 2015 using logit regression model and found out that age affected negatively the profitability of SMEs. Similar results were obtained by Süsi & Lukason (2019) who conducted a census study in Estonia on 67,058 SMEs. The study revealed that the biological age of managers decreased failure risk.

Other researchers found out that age did not have any effect of the financial performance. A study by Elizabeth (2018) on 500 companies found out that age of directors did not have any significant effect on the firm's performance. Pavlović et al. (2019) studied 35 companies for the period -2013-2016. The study explored board directors age on financial performance in the agricultural sector. The study found out that there was no evidence that the board of directors age impacted financial performance. The results indicated that age should not be considered important in any board composition.

## **2.4 Conceptual Framework**

Tamene (2016) defines a conceptual framework as a document that explains either graphically or in narrative form the main things to be studied and the key factors, concepts or variables and the presumed relationships among them. A conceptual framework can be a narrative, an equation, or a flow diagram. Figure 2.1 displays the conceptual framework for this study.

Figure 2.1: Conceptual Framework of Board Attributes and Financial Performance



Source: Research Data, 2022.

#### 2.4.1 Definition of Variables

Board size refers to the number of directors that serve in each board of an institution. The relationship between board size and financial performance is mixed. Some authors found out that board size is positively correlated with performance while other researchers found out that board size is negatively correlated with financial performance. According to Hakimah et al. (2019), large boards increase managerial costs to an organization and also encourages shirking. On the other hand, large boards increase a firm's performance by having diverse skills that are resourceful to a company.

Board gender is the presence of female directors in the board of directors of corporate organizations. The relationship between female gender and financial performance of firms has been two-fold. Some authors found a positive relationship where female directors are good at marketing (interactive) skills thus influencing financial performance positively, others researchers reported a negative relationship brought about by conflicts in decision making.

Directors Age-is the biological age of the director in a company. Most researchers found out that old CEOs impacted the performance of a firm positively while other researcher reported

that young directors impacted a firm's performance positively due to the fact that they take risks and they are willing to invest in research and development as well as new inventions which in turn increase a company's performance.

Firms age- refers to the number of years that a company has been in existence since incorporation. Firms that are older perform better financially due to the fact that they have gathered enough experience in the industry they belong as well having a huge customer base while young firms experience high production costs due to lack of experience as well as having less customer base.

Firm size- refers to the total net book value of the assets of the company. Companies having huge netbook value of assets perform better due to the assets they have and that they can obtain leverage easily because of the assets they have which in turn boosts the company's performance while firms with less assets struggle to obtain loans from creditors (Hakimah et al. 2019).

Liquidity- refers to the ease with which an asset or security can be converted into ready cash without affecting the market price. Companies that are liquid meet their short term obligations with ease thus boosting supplier relationship which in turn boosts a company's performance but companies that are not liquid experience poor supplier relationship and shortage of raw materials.

Management View- refers to the managerial opinions and perceptions of top 100 SMEs regarding the relationship between corporate governance and the financial performance of top 100 SMEs in Kenya.

ROA as a measure of financial performance was used by (Saidat et al. 2017; Mishra 2017; Palaniappan 2017 & Aktan et al. 2018) was also suitable for this study. Other measures of financial performance like Tobin Q and Return on Equity (ROE) were not possible since obtaining the market value of equity for these SMEs was not possible during the study period. Tobin Q is measured by dividing the equity market value by equity book value (Saidat et al., 2017). The Company's Act 2015 relaxed the minimum number of directors to one for private companies. This relaxation warranted the study of board size to determine how this legislation has been implemented to date.

## 2.4.2 Operationalization of Variables

The measurement of the stated data was measured by way of a Likert scale for the qualitative part of the management view variable.

Table 2.1: Operationalization of Variables

Variable Name	Type of Variable	Variable Coding	Measurement	Supporting Literature
Board Size	Independent	BS	Number of board directors.	Süsi & Lukason (2019); Saidat et al. (2017); Makropoulos et al. (2020); Aktan et al. (2018); Puni & Anlesinya (2020b)
Board Gender	Independent	BG	Number of female directors.	Süsi & Lukason (2019); Makropoulos et al. (2020); Shettima (2018). Supported by Upper Echelons Theory
Directors Age	Independent	AD	Biological age of the oldest director.	Süsi & Lukason (2019); Makropoulos et al. (2020). Supported by Upper Echelons Theory
Firm Age	Control	FA	Years in existence since incorporation	Assenga et al. (2018); Shehata et al. (2017)
Firm Size	Control	FS	Natural logarithm of net book value of total assets	Saidat et al. (2017); Aktan et al. (2018); Assenga et al. (2018); Shehata et al. (2017)s
Liquidity	Control	LIQ	Current Assets/ Current Liabilities	Aktan et al. (2018)
Performance	Dependent	ROA	Return on Assets = Net Income/Total Assets	Saidat et al. (2017); Mishra (2017); Palaniappan (2017); Aktan et al. (2018)
Management View	Independent		Likert Scale	Nemoto & Beglar (2014) Jebb et al. (2021)

Source: Research Data, 2022.

## 2.5 Chapter Summary and Research Gaps

Table 2.2: Chapter Summary and Research Gaps

Author and Year	Study Objective	Theory/Model	Key Findings	Gaps Identified
Süsi & Lukason (2019)	How corporate governance is connected with	Upper Echelons theory, Agency	Growth of managers age	The census study was only done in a single country of

	risk failure of SMEs in Estonia	theory. Logistic regression model.	reduced failure risk in SMEs.  Large boards led to higher failure risk for SMEs	Estonia. The SMEs covered were heterogeneous in terms of size from tiny micro firms to relatively established firms. Several SMEs in the study were family firms that had missing information.
Wachudi & Mboya 2012	Effect of board gender diversity on the performance of commercial banks in Kenya	Stepwise regression. Correlational research design. Tokenism theory, Agency theory	Female directors had a negative correlation with the performance	The study only focused only on commercial banks in Kenya. Used stepwise regression.
Shettima 2018	Board characteristics and Micro Finance Institutions performance	Pooled ordinary least squares. Panel data analysis. Fixed effects analysis. Agency theory	Female directors had a negative correlation with MFI performance	Geographical Gap, studied in Nigeria only. Period of 4 years (2010-2013). Sample was 30 MFI (120 observations).
Crossley, Malagila & Fosu 2017	Corporate governance and dividend payout in UK SMEs	Employed Fixed effects, lagged effects, two stage least squares regression. The outcome and substitution hypothesis	Board size, the frequency of board meetings, board gender diversity and Audit committee size have a significant relationship with the level of dividend pay-out	Covered only 4 years (2010-2013). Criteria used in selecting sample firms was bias. Sample size was 50 firms. Analysis was restricted to only 2 board characteristics. Data used in this study are primarily collected from secondary archival databases
Herrera Cano et al 2019	Representation of women on corporate boards of directors and firm financial performance	Systematic review and a met analysis.	There was no significant correlation between female directors and financial performance	The study did not involve empirical analysis. The study was a review of 40 published studies from 28 different countries.
Hashim 2014	Competence, performance		Performance of older workers was positively	The study was only conducted on higher education institutions

	and trainability of older workers of higher educational institutions in Malaysia		related to their competence and trainability. Older workers were competent, performing well and trainable.	in Malaysia. The study included older workers only. The self-assessment was bias. Only three universities were selected.
Aktan et al 2018	Corporate governance and performance of financial firms in Bahrain	Multiple linear regression. Transactional Theory, Agency theory and price theory	Board size was significant and positively correlated with ROA	The study was conducted for a period of 5 years (2011-2016). The study involved only financial firms in Bahrain
Puni & Anlesinya 2020	Corporate governance mechanisms and firm performance in a developing country	Panel regression analysis. Pooling of observations on cross section. Stewardship theory and Agency theory.	Board size had a positive impact on financial performance	The study was only conducted in Ghana on 38 companies
Hakimah, Y., Pratama, I., Fitri, H., & Ganatri, M. (2019)	Impact of intrinsic corporate governance on financial performance of Indonesian SMEs	Panel data. Agency theory and Proprietorship theory.	Board size and gender were found to be significant and had a positive influence on SMEs profitability.	The study involved a small sample of 50 SMEs. Short period of 2013-2017.
Minh, N., & Pham, B. T. (2020)	The influence of CEO characteristics on corporate environmental performance of SMEs in Vietnam	Cross-sectional data analysis. Upper echelon theory.	Gender significantly increased profitability of SMEs while age was found to have a negative effect on SMEs profitability	The study was conducted for one year (2015) only. Study conducted in Vietnam alone.
Shehata et al., 2017	Board diversity and firm performance. Evidence from the U.K. SMEs.	Panel data, fixed effects model. Resource dependency theory and Agency theory.	Both gender and age had a significant negative association with SMEs performance as	The study was only conducted in the United Kingdom.

Source: Research Data, 2022

### **2.5.1 Research Gaps**

Majority of the researchers were limited in geographical location. For instance Süsi & Lukason, (2019), studied corporate governance and failure risk in Estonia alone. The period studied was short. Minh & Pham, (2020) carried out a study covering only the year 2020. Regarding financial performance measurement, majority of the researchers Wachudi & Mboya (2012) used ROA and ROE as the performance measurement method and no other methods like Tobin's Q and Total Asset turnover. Many researchers used multiple regression technique, cross sectional, and panel data. No other type of data was used like pool and time series.



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter presents in detail the research design and the methods that were employed in answering the objectives as stated in chapter one. Here, the study involves research design, types of data collected, and their sources, study area, sampling techniques, population, and sampling size computation, data collection instruments that were be used, the reliability and validity, data analysis methods, results presentation and ethical considerations were discussed in detail. This chapter has eight sections. Section 3.2 covers research design, section 3.3 describes population and sampling, section 3.4 explains data collection methods, section 3.5 analyses data analysis and presentation, section 3.6 explains research quality, section 3.7 analyses objectivity of research and the final section 3.8 explains ethical considerations.

### **3.2 Research Philosophy**

Saunders, Lewis, & Thornhill (2019) define research philosophy as a system of beliefs and assumptions about knowledge development. This research adopted positivism philosophy where the researcher employed empirical methods and use of extensive quantitative analysis. Positivism philosophy is concerned with facts rather than impressions and the philosophy relies on operationalization of variables, measures and results from testing used to inform and advance the study. This philosophy emphasizes on scientific empiricist designed to yield pure data and facts not influenced by human bias and interpretation. This philosophy also focuses on independence, universalism, and objectivism.

### **3.3 The Research Design**

Krishnaswami & Satyaprasad (2010) defines a research design as a blueprint for data measurement, collection, and analysis. They further define a research design as a systematic and logical plan prepared for directing a research study. This research adopted correlational research design where the discovery of association or relationship between financial performance (Dependent variable) and board size, board gender diversity and age of directors (independent variables) was studied. Correlational research design has the advantages of consuming less time, less expensive, allows the researcher to conduct shallow data gathering via different methods like short survey, it is easy to identify statistical relationships and it is useful when experimental research is declared unethical. This research design has the

disadvantages of not accounting for the causal effect between variables, the researcher has no control over the variables and it allows only two variables at a time.

### 3.4 Population and Sampling

Uma (2003) defines population as the entire group of events, things of interest or people that the researcher intends to investigate. The population for this study was 260 top 100 SMEs for the years 2015-2019. Appendix 13 frequency of population elements tabulates the frequency of how the top 100 SMEs participated in the challenge between 2015 and 2019. The analysis of the 260 top 100 SMEs was arrived at by the use of Microsoft excel pivot table that displayed the population as 260 as well as the frequencies tabulated in appendix 13. The list of these top 100 SMEs was obtained from the East Africa top 100 website on 14<sup>th</sup> September 2021. The population under this study was 260 top 100 SMEs (appendix 13) and not 500 (100\*5 years) because the frequency of participation was different. Appendix 12 displays nine (9) SMEs participated in the top 100 SME challenge for all the five years under the study, 20 SMEs participated four times, 35 SMEs participated for three years, 74 participated for two years and 122 SMEs participated once during the study period. The participation of some of the SMEs in the top 100 challenge for more than one year reduced the population to 260 and not 500 (100\*5) SMEs. The population elements of the 260 SMEs whose data was used in this study appears in appendix 13. The population industry/ sector is tabulated in Table 3.1 below.

Table 3.1: Population by Industry/ Sector

No.	Industry/ Sector	Number of Companies	No.	Industry/ Sector	Number of Companies
1.	Agriculture	16	22.	Furniture	5
2.	Air Compressor Manufacturers & Dealers	1	23.	Healthcare	12
3.	Air Conditioning & Refrigeration	2	24.	Hotel	9
4.	Aluminium Fabricators	1	25.	Human Resource	1
5.	Apparel	4	26.	Information Technology	23
6.	Audio Visual	3	27.	Insurance	6
7.	Automobile	15	28.	Logistics	19
8.	Beauty	1	29.	Manufacturing	21
9.	Business & Management Consultants	1	30.	Marketing	4
10.	Car Hire	2	31.	Promotional Branding & Merchandising	1
11.	Carpet & Rug Dealers	1	32.	Real Estate	7

12. Cleaning	4	33. Rental & Leasing	1
13. Communication	3	34. Retail	2
14. Construction	23	35. Safety Equipment & Services	2
15. Consultancy	2	36. Security	5
16. Education	3	37. Stationery & Printing	6
17. Embroidery	1	38. Steel Fabricators & Products	5
18. Energy	13	39. Supplies	10
19. Entertainment	1	40. Tours & Travel	11
20. Financial Services	6	41. Water	5
21. Fire Safety, Prevention suppliers & Consultants	1	42. Wholesale Shops	1
<b>Total</b>	<b>260</b>		

Source, Research Data 2022.

Adams, Khan & Raesidec (2013) defines sampling as a technique or process of choosing a suitable sample for purposes of determining the characteristics or parameters of a whole population. This study used non-probability sampling technique. Purposive sampling was used in the study where choosing members of the population for sampling relied on the judgement of the researcher. Krishnaswami & Satyaprasad (2010) defines a sample as a part of the population or a subset of the population. This research adopted Israel, (2012) sample size formula determination of  $n = N / (1 + N(e)^2)$  for determining the sample size. The sample size for this research was one hundred and fifty-eight (158) SMEs as per the formula. The confidence interval was 95% while the level of precision was 5%.

$$n = \frac{N}{1 + N(e)^2}$$

$$[260 / (1 + (260 * 0.05 * 0.05))] = 158$$

Where

n is the sample size= 158 SMEs

N is the Population size = 260 SMEs

e is the Margin of Error = 5% or 0.05

### 3.5 Data Collection Methods

This research utilized primary data that was collected via structured questionnaires to the sampled respondents. The questionnaire used was divided into six parts (A, B, C, D, E and F). Section A captured general information about the company, section B involved board size, section C captured board gender information. Section D involved director's age, section E

captured management's view on the relationship between corporate governance and the financial performance of SMEs and section F captured financial information. The questionnaire was closed ended where Likert Scale was used. The questionnaires were administered by email and follow up phone calls to confirm receipt of the email containing the questionnaire. To build confidence with the respondents, the researcher attached the University introductory letter (Appendix 1) as well as Ethical approval (Appendix 3) to ensure the safety, confidence, and confidentiality of the respondents. The researcher also attached the National Commission of Science and Technology Innovation (NACOSTI) license (Appendix 2) that legalized this research. The respondents to the questionnaires were senior officers among them Chief Executive Officers, Chief Operating Officers, Finance Managers, Chief Accountants or Accountants and Company Secretaries. The respondents were selected by convenience such that whoever was available (Chief Executive Officers, Chief Operating Officers, Finance Managers, Chief Accountants or Accountants and Company Secretaries) responded to the questionnaire. If all senior officers were available, the researcher preferred the senior most officer or were guided by the company as to who the respondent to the questionnaire was.

### **3.6 Data Analysis**

Data analysis refers to the computation of certain indices or measures along with the search for patterns of relationship that exist among the data groups (Kothari, 2004). Data for this study was collected by the researcher alone and no research assistants were involved. The following four distinct steps were followed in analyzing data.

Step one involved data preparation. This entailed data editing, coding and data entry. Kothari,(2004) defines data editing as a process that examines collected raw data to detect errors and omissions and to correct these where possible. Editing was done to ensure the collected data was accurate, complete and consistent with other gathered facts and was uniformly entered (Kothari, 2004). Data received from the respondents via questionnaires was checked for accuracy and completeness. For the incomplete data and omissions, the researcher called or emailed the respondents to seek further information or clarity. After data was edited, the edited data was coded to conceal the respondents' identity. The edited and coded data was then captured (data entry) in Microsoft Excel software (MS Excel) via keyboarding.

Step two involved computation of return on asset (ROA) ratio using Microsoft Excel then saved and secured the excel workbook with a password as well as securing the computer with

a password. Step three entailed structuring or formatting the captured data in excel according to the Stata Software version 13 rules or parameters. After formatting the data, the researcher uploaded the same to Stata software for further analysis that determined the relationship between corporate governance variables and the financial performance of SMEs.

Step four involved carrying out diagnostic tests like normality test, linearity test, multi-collinearity test, homoscedasticity test among others. These tests ensured the estimator was Best Linear Unbiased Estimator (BLUE). Testing of the relationship between the variables was also carried out at this stage. This study adopted stepwise estimation that determined the independent variables that were included in the model. The construction of the regression model involved the selection of independent variables that were used in the final model. This stepwise estimation entailed adding or removing potential explanatory variables in succession and testing for statistical significance after each iteration. Stata software version 13 was used in this stepwise estimation.

The study applied Fixed Effects Model (FEM) using panel data to estimate the relationship between corporate governance and the financial performance of SMEs. Data was analyzed using Stata software version 13. Panel data was used in the study. The diagnostic tests result (application of Hausman tests) was carried out, this study utilized fixed effects model (FEM) after the Hausman test results favored fixed effects model.

The following model was used in analyzing the relationship between corporate governance variables and the financial performance of SMEs.

$$ROA_{it} = B0_{it} + B1BS_{it} + B2BG_{it} + B3AD_{it} + B4FS_{it} + B5LIQ_{it} + B6FA_{it} + \epsilon_{it}$$

ROA<sub>it</sub>= Return on Assets

B0<sub>it</sub> = Constant

BS<sub>it</sub>=Board Size

BG<sub>it</sub>=Board Gender

AD<sub>it</sub>= Age of Directors

FS<sub>it</sub>- Firm Size

LIQ<sub>it</sub>- Liquidity

FA<sub>it</sub>- Firm Age

$\epsilon_{it}$ =Error Term

B0, B1, B2, B3, B4, B5 and B6 are coefficients.

The hard copies obtained from the respondents were stored in a secure place under lock and key to protect the respondents' data and to maintain confidentiality of the information. To build confidence with the respondents, the researcher attached the University introductory letter as well as Ethical approval to ensure the safety, confidence, and confidentiality of the respondents. The researcher also attached the National Commission of Science and Technology Innovation (NACOSTI) license that legalized this research.

### **3.6.1 Pilot Study**

The researcher carried out a pilot survey for the purpose of guaranteeing the reliability and validity of the research questions. A pilot study refers to a small-scale preliminary study conducted before the main research to check the feasibility or to improve the design of the. The researcher conducted the pilot survey with five respondents from the SMEs sample. The researcher factored in the suggestions made by respondents that aided in improving the research instrument.

### **3.6.2 Diagnostic Tests**

This study utilized panel data estimation technique due to the advantages it possesses of a great degree of freedom and less multi-collinearity hence more efficient estimates. The Hausman test was conducted, and the Fixed effects model was favored by the test of Hausman. This test examined the correlation of different errors with explanatory variables. Other tests that were conducted included stationarity test, homoscedasticity (Breusch Pagan), normality (Jarque Bera test), independence of errors and multi-collinearity (VIF).

## **3.7 Research Quality – Validity, Reliability and Objectivity of the Research.**

### **3.7.1 Validity**

Validity is the accuracy with which a researcher measures what was intended to be measured (Uma, 2013). Validity is of two types:

Internal validity is the confidence with which a causal relationship is stated from measurement (Uma, 2013). This relies on the degree to which extraneous variables have been controlled for the study.

External validity refers to the degree with which research findings can be generalized (Uma ,2013). This answers the question of whether the same results can be obtained at other times in other settings.

Content validity for the instrument (questionnaire) was assessed by the help of this research professional supervisor who is an expert in the field of corporate governance and finance. Opinion was sought on the suitability of the instrument and the questions posed to the respondents.

### **3.7.2 Reliability**

Reliability is a measure of the degree to which research instruments yield consistent results after repeated trials (Uma,2013). Reliability can be tested through piloting or pretesting. This study adopted pretesting of the research instrument before the actual data collection to assess how reliable the instrument was. This was done by requesting the respondents to participate in the pretesting exercise. Pretesting sensitizes the respondents and therefore they may tend to perform better on a post-test not because of the instrument alone but because of the earlier sensitization (pretest) to the test.

### **3.8 Objectivity of the Research**

Objectivity of the research involved studies of attitude, attitude changes, persuasion awareness, purchase intentions, cognition, and actions. This research finding relied on the nature of what was studied rather than on beliefs, values, and personality of the researcher. This research remained objective and was not influenced to obtain results that favored the researcher.

### **3.9 Ethical Considerations**

This study observed the ethical standards and ensured all the research materials used in this study were fully acknowledged by citing and referencing. The researcher handled all the information received from respondents with a lot of confidentiality. The researcher also sought permission to collect data from the respondents and did not coerce or induce the respondents into accepting to respond to the study. The researcher also presented actual results that were obtained without manipulating any information to gain a favorable outcome. The investigator sought for a National Commission for Science, Technology, and Innovation (NACOSTI) study

license (Appendix 2) that legalized this study as well as the ethical approval (Appendix 3) from the University.



## CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

### 4.1 Introduction

This chapter presents the empirical outcomes of the study on the relationship between corporate governance and the financial performance of SMEs in Kenya. The chapter discusses empirical results, descriptive statistics, diagnostic tests results and panel data analysis.

### 4.2 Response Rate

A total of 100 questionnaires were issued out to the respondents. This comprised of 95 questionnaires that were issued out via email and 5 questionnaires that were issued out physically. Reminder emails were sent to the respondents periodically. 22 questionnaires were received from the respondents. This implies that there were one hundred and ten observations ( $22 \times 5 = 110$ ) for this study. A total of one hundred questionnaires were issued out due to the limitation in accessing these top 100 SMEs. The questionnaires distributed were 100 and not 260 as per the population or 158 as per the sample size because according to appendix 11, 87 top 100 SMEs did not have websites, 73 top 100 SMEs had websites with dysfunctional emails or phone numbers, 15 top 100 SMEs had information in the companies' directory but the contact information was not functioning e.g. phone contacts were not working or the emails provided returned undelivered messages. Lack of websites as well dysfunctional contacts (emails and phone contacts) limited the distribution of questionnaires to 100. A total of 173 top 100 SMEs had websites. The analysis of the 260 top 100 SMEs was arrived at by the use of Microsoft excel pivot table that displayed the population as 260 as well as the frequencies tabulated in appendix 13.

The response rate of 22% was also experienced by studies of Kamazima et al. (2017) used 10 listed commercial banks in Kenya for a period of five years, Assenga et al. (2018) used balanced panel data regression analysis on 80 firm-years observations (2006-2013), Shettima & Dzolkarnaini, (2018) used a sample of 120 firm-year observations covering 30 MFIs in the periods 2010 to 2013 and Shettima & Dzolkarnaini, (2018) used 30 textile firms listed on the Pakistan Stock Exchange (PSX) from 2012 to 2016.

This represented 22 percent as the response rate as tabulated in table 4.1.

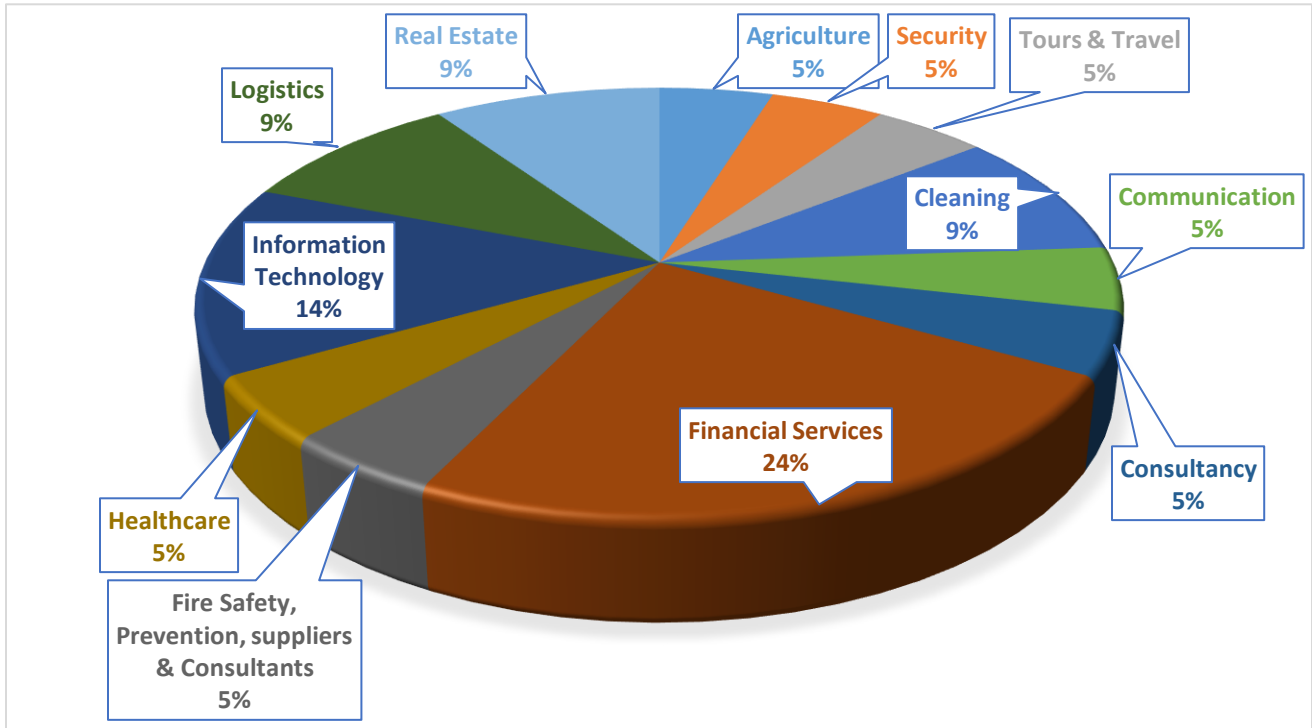
Table 4.1: Response Rate

Response	Frequency	Percentage
Response Rate	22	22%
Non-Response Rate	78	78%
Total	100	100%

Source: Research Data, 2022.

### 4.3 Analysis of the Respondents Per Industry

Figure 4.1: Analysis of the Respondents



Source: Research Data, 2022.

The findings in figure 4.1 indicates that 23% of the respondents were in the financial services sector followed by the information technology sector at 14%. Logistics, real estate and cleaning sectors had all responded at the rate of 9%. Agriculture, automobile, communication, consultancy, healthcare, fire safety, prevention, suppliers and consultants, security and tours and travel sectors each responded at 5% in this study.

### 4.4 Descriptive Statistics

#### 4.4.1 Summary of Descriptive Results

Table 4.2 below tabulates the summary of descriptive results obtained from the primary data that was collected for this study.

Table 4.2: Descriptive Statistics for all the Variables

Variable	Mean	Standard Deviation	Minimum Values	Maximum Values	Skewness	Kurtosis	Adj chi2 (2)	Prob>chi2
roa	0.587909	0.740985	-1.45	3.31	0.0000	0.0011	26.02	0.0000
dage	56.8636	5.0256	45.0000	66.0000	0.2133	0.0415	5.5400	0.0628
bs	4.9091	2.0343	2.000	10.0000	0.0353	0.2345	5.6500	0.0594
fedf	1.5273	1.0110	0.0000	5.0000	0.0000	0.0000	36.8700	0.0000
liq	2.9310	2.9181	0.2333	15.6600	0.0000	0.0000	49.8200	0.0000
fs	7.5309	1.7570	1.27537	9.3900	0.0000	0.0000	57.6400	0.0000
fage	15.0909	10.2845	1.0000	41.0000	0.0118	0.1340	7.7500	0.0207

Source: Research Data, 2022.

Table 4.2 indicates that on average (mean) the firms enjoyed a return on assets (ROA) of 58.79%. This indicates that these firms were profitable. This is a good sign that these companies were utilizing their assets efficiently. The maximum ROA was 3.31 implying that these firms had a higher assets efficiency while the minimum ROA was -1.45 implying that at one particular year there is a firm that made a loss thus not utilizing its assets efficiently. The liquidity (liq) of these firms was approximately three. This indicates that these firms were highly liquid and that they could meet their short-term obligations as and when they fell due. A liquidity ratio of greater than one (1) implies that a company was able to meet its current obligations as and when they fell due (Sundas & Butt 2021; Kim-Soon et al., 2013). On the contrary, a liquidity ratio of below one (1) implies that a company would not be able to meet its current obligations.

The firm age (fage) was on average (mean) 15 years. This implies that majority of the firms were older than fifteen years since their incorporation with the oldest company having forty-one years and the youngest company having one year as of 2015 and five years as of 2019. On average, the firm size (fs) was 33.95 million i.e. to the natural log  $10^{7.5309}$  was obtained after log 33.95 million.

#### 4.5 Analysis of Corporate Governance Attributes on Top 100 SMEs in Kenya

This section analyses the findings of the first objective the analysis of corporate governance attributes on Top 100 SMEs in Kenya. The analysis of directors age, board size and female directors are discussed.

#### 4.5.1 Board Size Analysis

Table 4.4 displays board size analysis. On average, the board size was approximately five board members. One firm had a board size of two. This implies that the minimum board size under the study was two. The maximum board size was ten board members.

Table 4.3: Analysis of Board Size

Average Board Size	5
Maximum Board Size	10
Minimum Board Size	2

Source: Research Data, 2022.

#### 4.5.2 Analysis of Female Directors

Table 4.4 tabulates the analysis of female directors where female directors were approximately two. This implies that on average the female directors were two. The results in table 4.5 also indicated that one SME did not have a female director. This implied that the minimum of number of female directors was zero. The maximum number of female directors was five. 50% of the companies had a third of the directors as female. This indicates that a half of the companies studied did not meet the one third gender rule. 5% of the companies had a female board chair. This implies that 95% of the companies were dominated by male board chairmen. 5% of the companies had a policy on gender. This clearly indicates that majority (95%) of the SMEs did not have policies on gender.

Table 4.4: Analysis of Female Directors

Average Number of Female Directors	2
Companies with no Female Directors	1
Maximum Number of Female Directors	5
Companies that had a third of Female Directors	50%
Companies with a Female Board Chair	5%
Companies with policy on Gender	5%

Source: Research Data, 2022.

#### 4.5.3 Analysis of Directors Age

According to table 4.5, the directors of these companies had on average fifty-seven years with the youngest director at forty-five and the oldest director at sixty-six. 5% of the companies had a policy on age limit. This indicates that majority (95%) of the companies did not have a policy on the age limit of directors.

Table 4.5: Analysis of Directors Age

Youngest Directors Age	45
Average Directors Age	57
Oldest Directors Age	66
Companies with Policy on Age Limit	5%

Source: Research Data, 2022.

#### **4.6 Analysis of Management View on the Relationship Between Corporate Governance and the Financial Performance of Top 100 SMEs**

Table 4.6 displays the analysis of the managements 'view on the relationship between corporate governance and the financial performance of SMEs in Kenya. Regarding functional boards improving the financial performance of SMEs, 26% of the respondents believed that functional boards highly improve the financial performance of their organizations, 59% believed functional boards improve their financial performance while 12% and 3% of the respondents believed that functional boards slightly improve and do not improve their firm's financial performance respectively.

On large boards improving financial performance, 33% of the respondents believed large boards highly improve their organizations financial performance. 45% believed that large boards improve their financial performance while 22% believed that large boards slightly improved their company's financial performance.

32% of the respondents agreed that small boards highly improve their organizations financial performance, 66% believed small boards improve their financial performance while 2% of the respondents agreed that small boards slightly improve their performance.

Regarding female directors improving the financial performance of SMEs, 15% of the respondents agreed that female directors improve their financial performance, 22% agreed that female directors improve their financial performance, 12% agreed that they slightly improve their financial performance while 51% believed that female directors do not improve their financial performance.

Table 4.6: Management View on the Relationship Between Corporate Governance and the Financial Performance of SMEs

	Highly Improve	Improve	Slightly Improve	No Improvement
Functional Boards Improving the Financial Performance of SMEs	26%	59%	12%	3%
Large Boards Improving the Financial Performance of SMEs	33%	45%	22%	0%
Small Boards Improving the Financial Performance of SMEs	32%	66%	2%	0%
Boards with Female Directors Improving Financial Performance of SMEs	15%	22%	12%	51%

Source: Research Data, 2022.

#### 4.7 Diagnostic Tests

The research employed tests that appear in table 4.3 to ensure the assumptions of the classical linear regression were complied with and that the model was Best Linear Unbiased Estimator (BLUE). The various tests conducted are presented in this chapter four.

Table 4.7: Diagnostic Tests

Test	Significance	Test Used	Conclusion
Normality	Checks whether the data is normally distributed	Skewness and Kurtosis	Skewness lower than 2 and Kurtosis lower than 7 proves normality of the data.
Multicollinearity	Checks whether the correlations within the independent variables are strong	Variance Inflation Factor (VIF)	VIF of around or greater than 10 shows a high degree of multicollinearity. VIF of less than 10 shows no multicollinearity among the variables
Autocorrelation	Checks that the variables in the model are not correlated or are independent of each other.	Woolridge	The p-values should be less than 0.05 to ensure there is no autocorrelation
Stationarity	Checks for the mean, variance, and autocorrelation	Hadri LM	The p-values should be less than 0.05 to ensure there is no unit root

Heteroskedasticity	Checks for the variance of the residuals whether this variance is constant.	Breusch-Pagan/ Cook-Weisberg	The p-values should be more than 0.05 to ensure there is no heteroskedasticity problem.
Misspecification	Checks whether the model is correctly specified	Ramsey Reset	The p-values should be more than 0.05 to ensure the model is correctly specified.
Reliability	Tests the quality of the measurement procedure used when collecting data	Cronbach's Alpha	$\alpha \geq 0.9$ Excellent $0.9 > \alpha \geq 0.8$ Very Good $0.8 > \alpha \geq 0.7$ Adequate $0.7 > \alpha \geq 0.6$ Acceptable Goulding & Syed-Khuzzan, (2014)

Source: Research Data, 2022

#### 4.7.1 Hausman test for Fixed Effects and Random Effects Model

The researcher applied Hausman test to determine whether the model had random or fixed effects which thereafter determined the model that was used. The null hypothesis was that random effects model was preferred while the alternative hypothesis was that the fixed effects model was preferred.

Table 4.8: Hausman Test

Test Statistic Chi (2)	13.34
P-value	0.0379

Source: Research Data, 2022

From the findings presented in table 4.8, the Hausman test returned a Prob>chi2 of 0.0379 which was less than 5% level of significance. Therefore, the researcher rejected the null hypothesis and concluded that the fixed effect model was appropriate to explain the outcomes. The detailed Hausman test appears in appendix 6.

#### 4.7.2 Woolridge test for Autocorrelation

Autocorrelation refers to the relationship between the error terms. As an assumption of the classical linear regression the error terms are not supposed to be correlated with one another and that they should be independent of each other. The study employed the Woolridge test to estimate the autocorrelation problem in the model. As a rule of the thumb, the Woolridge test statistic that ranges between 0 to 4 indication no autocorrelation. According to table 4.2, the

results indicate probability is 0.0193 which is less than 5% level of significance. This implies that the results meet the threshold of no autocorrelation.

Figure 4.2: Woolridge Test on Autocorrelation

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H0: no first-order autocorrelation
F (1,21) =6.423
Prob>F=0.0193

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Source: Research Data, 2022

### Hadri LM Stationarity Test

H0: All panels are stationary

Ha: some panels contain unit roots

Table 4.9: Stationarity Test

Variable	Z-Statistic	p-value
roa	2.1091	0.0175
dage	7.8451	0.0000
bs	2.3074	0.0105
fedl	2.3074	0.0105
fs	2.4679	0.0068
liq	3.4269	0.0003
fage	7.8451	0.0000

Source: Research Data, 2022

A unit root is a feature of stochastic processes (such as random walks) that can cause problems in statistical inference involving time-series models. However, a panel can also suffer from the problem of unit root, therefore, it is appropriate to test the data for the issue of unit root using the method proposed by Hadri (2000). The results in Table 4.9 show that all the variables were not stationary and does contain unit root. The alternative hypothesis of panels containing unit roots has been rejected in all the cases.

According to Brooks (2008) stationarity is defined as one with constant mean, constant variance and constant auto-covariance for each given time lag. The use of non-stationary data can lead to a spurious regression. Stationarity is a desirable property of an estimated model and if the variables employed in a model are non-stationary, this can be proved that the standard assumptions for the asymptotic analysis was not valid.

According to table 4.9, the researcher carried out stationarity test using the Hadri LM test whose null hypothesis is some panels are stationary while the alternative hypothesis was that some panels contain unit roots. The p-values were less than 5% level of significance implying

that the panel data had unit roots. The researcher failed to accept the alternative hypothesis in favour of the alternative hypothesis that the data was not stationary.

#### 4.7.3 Normality Test- Skewness and Kurtosis

This study adopted the skewness and kurtosis to test for the normal distribution assumption in the panel data adopted. One of the asymptotic assumptions is that the residuals should follow a normal distribution. Normality test is carried out to ensure the data follows a normal distribution. According to table 4.11, Doornik-Hansen returned a probability of 0.3318 which was above 5% significance level. This indicates that the residuals are normally distributed. The normality test can also be confirmed by the histogram chart that appears in appendix 10. The probability for the residuals is 0.4656. This also confirms that the residuals are normally distributed.

The normal distribution was also confirmed in table 4.10 where the pr (skewness) and pr (kurtosis) were  $< 0.05$ . This confirmed that the data was normally distributed.

Table 4.10: Normality Test Skewness and Kurtosis

Variable	Pr (Skewness)	Kurtosis	adj chi2 (2)	Prob>chi2
roa	0.0000	0.0011	26.0200	0.0000
dage	0.2133	0.0415	5.5400	0.0628
bs	0.0353	0.2345	5.6500	0.0594
fedl	0.0000	0.0000	36.8700	0.0000
liq	0.0000	0.0000	49.8200	0.0000
fs	0.0000	0.0000	57.6400	0.0000
fage	0.0118	0.1340	7.7500	0.0207

Source: Research Data, 2022

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	Adj chi2 (2)	Prob>chi2
Residuals	110	0.6347	0.2595	1.53	0.4656

Source: Research Data, 2022

Table 4.11: Doornik Hansen Test for Normality

Doornik-Hansen	chi2 (2)	Prob>chi2
	2.207	0.3318

Source: Research Data, 2022

#### 4.7.4 Test for Heteroskedasticity

The researcher tested heteroskedasticity through the Breush Pagan method with the null hypothesis being constant variance and the alternative hypothesis as variables fitted with values of ROA.

Breusch-pagan/Cook-Weisberg test for heteroskedasticity

Ho: Constant Variance

Variables: fitted with values of roa

According to Wooldridge, J. M. (2013), heteroskedasticity states that the variance of the unobserved error term on the explanatory variables is not constant. This study adopted the Breusch Godfrey LM test statistic that checked for the presence of heteroskedasticity. As a standard, the p-values should be greater than 0.05 to ensure there is no heteroskedasticity problem. According to table 4.12, the p-value was 8.95% which was greater than 5% hence there was no heteroskedasticity. The researcher failed to reject the null hypothesis and concluded that the variance was constant. The detailed analysis of this test appears in appendix 8.

Table 4.12: Heteroskedasticity Test

chi2 (1)	2.88
Prob>chi2	0.0895

Source: Research Data, 2022

#### 4.7.5 Multicollinearity

Multi-collinearity occurs when independent variables are correlated with each other. Whenever two or more independent variables are correlated with each other, this becomes a problem, and that the data cannot meet the requirements of a Best Linear Unbiased (BLUE) model. The researcher checked for the presence of multicollinearity in the model by testing for multicollinearity using the Variance Inflation Factor (VIF). As a rule of the thumb, the VIF of less than 10 indicates that multicollinearity is not a problem. According to the table 4.13, the VIF mean was 1.58 hence the panel data had no multicollinearity.

Table 4.13: Multicollinearity Test

Variable	VIF	1/VIF
bs	2.17	0.461234
dage	1.82	0.550074
fedi	1.57	0.63536
fs	1.52	0.659522
fage	1.32	0.754951
liq	1.09	0.915868
Mean VIF	1.58	

Source: Research Data, 2022

#### 4.7.6 Cronbach $\alpha$ Test for Reliability

Coefficient  $\alpha$  ranges from 0 to 1. A low Cronbach's  $\alpha$  coefficient indicates that variables may be heterogeneous and hence poorly represent the measure (Goulding & Syed-Khuzzan, 2014). According to Goulding & Syed-Khuzzan, (2014), the Cronbach  $\alpha$  should be the first measure that is calculated to assess the quality of the measurement scale. However, it is argued that  $\alpha$  coefficient of around 0.90 is excellent, around 0.80 is very good, and around 0.70 is adequate but a Cronbach  $\alpha$  value between 0.60 and 0.70 are at the lower limit of acceptability. Nevertheless, it is common practice to assume that an  $\alpha$  of 0.80 (or above) implies an acceptable level of internal consistency/reliability (Goulding & Syed-Khuzzan, 2014)

Table 4.14: Cronbach Test

Average inter item correlation	0.1811
Number of items in the scale	7
Scale reliability coefficient	0.6075

Source: Research Data, 2022

According to table 4.14, the reliability coefficient was 0.6075. This implies that the data instrument was reliable as it is acceptable as per the Cronbach decision criteria (Goulding & Syed-Khuzzan, 2014).

#### 4.7.7 Model Specification

The Ramsey Regression Equation Specification Error Test (Ramsey Reset) is a general model specification test for linear regression models that specifically tests whether combinations that are nonlinear on installed values helps in explaining explanatory variables (Agustinus, 2020). The study employed Ramsey Reset to determine the model specification. According to table 4.15, the p value was 1.1% which was less than 5% level of significance.

In this case the researcher failed to reject the null hypothesis and concluded that the model did not have omitted variables. This implies that the model was correctly specified.

Ho: model has no omitted variables

Table 4.15: Model Specification

F (3,100)	3.90
Prob>F	0.0110

Source: Research Data, 2022

## 4.8 Panel Data Analysis

This section presents an analysis of panel data for all the variables in the study. Panel data or longitudinal data is a set of time series for each cross-sectional in the data set. It is the data set that has both time series and cross-sectional data. Table 4.12 below summarizes statistical significance of all the variables as tabulated in the column  $p>|z|$  at 95% confidence level. The section answers the research question of establishing the relationship between board attributes and the financial performance of SMEs.

### 4.8.1 Analysis of the Relationship Between Board Attributes and the Financial Performance of Top 100 SMEs

This section presents the results of the empirical analysis on the relationship between the board attributes (board size (bs), directors age (dage) and female directors (fedi)) as independent variables and return on assets (ROA) as the dependent variable. Table 4.16 tabulates the output of the empirical analysis. The control variables of liquidity (liq), firm size (fs) and firm age (fage) are also tabulated in table 4.16.

### 4.8.2 Fixed Effects Model Output

Table 4.16: Fixed Effects Model Output

roa	coefficient	Std. Err	t	$p> z $	95% conf. Interval	
dage	-0.0664234	0.0226552	-2.93	0.008	-0.1135375	-0.0193094
bs	-1.108508	0.0106487	-104.1	0.000	-1.130653	-1.086363
fedi	2.338312	0.1370795	17.06	0.000	2.05324	2.623384
liq	0.0195687	0.0118334	1.65	0.113	-0.0050403	0.0441776
fs	0.0866649	0.0146254	5.93	0.000	0.0562497	0.1170802
fage	0.0326336	0.0136793	2.39	0.027	0.004186	0.0610812
_cons	5.03302	1.178899	4.27	0.000	2.581365	7.484675
Sigma_u		2.3063334				

Sigma_e	0.25845932
Rho	0.98759719 (fraction of variance due to u i)
R-squared	0.1902
F (6,82)	3.21
Prob>F.	0.0070

Source: Research Data, 2022

According to table 4.16, the study obtained R-squared of 19.02%. This implies that the independent variables influenced the dependent variable (ROA) to the extent of 19.02%. 80.98% of the dependent variable was influenced by other factors not explained in the above model.

Board size (bs) influenced the return on assets (ROA) negatively with a coefficient of -1.108508 and a p-value of 0.000 (0%) which indicates that board size was statistically significant at 5% level of significance. The t-statistic was -104.1. the coefficient of -1.108508 implies that when board size changes by 100% ROA reduces by -1.108508.

Female directors (fedi) influenced the return on assets positively with a coefficient of 2.338312 and a p-value of 0.000 (0%) indicating that female directors was statistically significant since the p-value was below the 5% significance level. The t-statistic was 17.06. the coefficient 2.338312 indicates that when female directors change by 100% ROA changes by 2.338312.

The results above also indicate that directors age (dage) influenced the return on assets negatively with the coefficient of -0.0664234, a p-value of 0.008 (0.8%) and a t-statistic of -2.93. This implies that directors age was statistically significant as it was below the 5% level of significance threshold. The coefficient of -0.0664234 can be explained as when directors age changes by 100% ROA reduces by -0.0664234.

Firm age (fage) influenced ROA positively with a coefficient of 0.0326336 and a p-value of 0.027 (2.7%) implying that firm age was statistically significant. The p values of all the variables were statistically significant at 5% significance level except liquidity that obtained a p value of 11.3% which was not statistically significant. Firm age t-statistic was 2.39. The coefficient of 0.0326336 indicates that when firm age changes by 100% ROA changes by positive 0.0326336.

Firm size (fs) influenced the return on assets positively with a coefficient of 0.0866649 and a p-value of 0.000 (0%) indicating that firm size was statistically significant at 5% level

of significance. The t-statistic was 5.93. if firm size changes by 100% ROA changes by positive 0.0866649.

Liquidity (liq) influenced the return on assets positively with a coefficient of 0.0195687 and a p-value 0.113 (11.3%) implying that liquidity was not statistically significant as it did not meet the cutoff of below 5% for it to be statistically significant. Liquidity had a t-statistic of 1.65. the coefficient of 0.0195687 can be explained that when liquidity changes by 100% ROA changes by 0.0195687.

The overall results were statistically significance as reported by the F-test results of 0.0070 (0.7%) as tabulated in table 4.16.

#### **4.9 Econometric Model**

The econometric model for this study appears below as a summary from the results of the fixed effects model tabulated in table 4.16.

$ROA = 5.03302 - 0.0664234 \text{ dage} - 1.108508 \text{ bs} + 2.338312 \text{ fed} + 0.0195687 \text{ liq} + 0.0866649 \text{ fs} + 0.0326336 \text{ fage}$

The econometric model indicates that directors age (dage) and board size (bs) had a negative with ROA with the coefficients of -0.0664234 and -1.108508 respectively. Female directors (fedi), liquidity (liq), firm size (fs) and firm age (fage) influenced the dependent variable ROA positively with the coefficients of 2.338312, 0.0195687, 0.0866649 and 0.0326336 respectively. The model also indicates a constant of +5.03302 which implies that when the independent and the control variables are zero, ROA was 5.03302.

#### **4.10 Chapter Summary**

The main purpose of this study was addressed by three objectives. The first objective was to analyze corporate governance attributes of SMEs in Kenya. The analysis revealed that directors of these companies had on average fifty-seven years with the youngest director at forty-five years and the oldest director at sixty-six years. 5% of the companies had a policy on age limit. This indicates that majority (95%) of the companies did not have a policy on directors age limit. Regarding board size, on average the board size was approximately five board members. One firm had a board size of two. This implies that the minimum board size under the study was two. The maximum board size was ten board members. The female directors were approximately two. This indicates that on average the female directors were two. One SME

did not have a female director. This implied that the minimum of number of female directors was zero. The maximum number of female directors was five.

The second objective was to establish the relationship between the board attributes (board size, female directors, and directors age) and the financial performance of SMEs in Kenya. Under this second objective, the corporate governance attributes were board size, female directors, and age of directors. The results indicated that directors age (dage) influenced the return on assets negatively and was statistically significant. Board size (bs) influenced the return on assets (ROA) negatively and was statistically significant. Female directors (fedi) influenced the return on assets positively and was also statistically significant since the p-value was below the 5% significance level. Liquidity (liq) influenced the return on assets positively but was not statistically significant as it did not meet the cutoff of below 5% for it to be statistically significant. Firm size (fs) influenced the return on assets positively and was statistically significant at 5% level of significance. Firm age (fage) influenced ROA positively and was statistically significant. The p values of all the variables were statistically significant at 5% significance level except liquidity that obtained a p value of 11.3% which was not statistically significant.

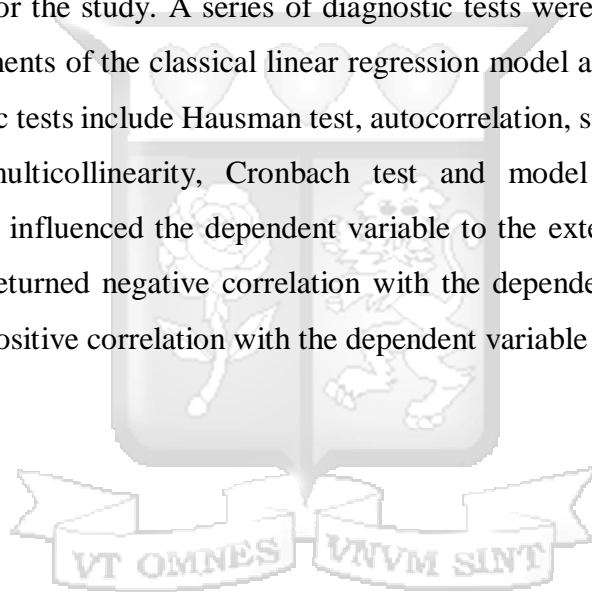
The third objective was to establish the management view on the relationship between corporate governance and the financial performance of SMEs in Kenya. The managements 'view on the relationship between corporate governance and the financial performance of SMEs in Kenya was addressed by four parameters: functional board, Large boards, small boards and boards with female directors. Regarding functional boards improving the financial performance of SMEs, 26% of the respondents believed that functional boards highly improve the financial performance of their organizations, 59% believed functional boards improve their financial performance while 12% and 3% of the respondents believed that functional boards slightly improve and do not improve their firm's financial performance respectively.

On large boards improving financial performance, 33% of the respondents believed large boards highly improve their organizations financial performance. 45% believed that large boards improve their financial performance while 22% believed that large boards slightly improved their company's financial performance.

32% of the respondents agreed that small boards highly improve their organizations financial performance, 66% believed small boards improve their financial performance while 2% of the respondents agreed that small boards slightly improve their performance.

Regarding female directors improving the financial performance of SMEs, 15% of the respondents agreed that female directors improve their financial performance, 22% agreed that female directors improve their financial performance, 12% agreed that they slightly improve their financial performance while 51% believed that female directors do not improve their financial performance.

Panel data was used with the analysis of Stata software version 13. The fixed effects model was adopted for the study. A series of diagnostic tests were carried out to ensure the data met the requirements of the classical linear regression model as well as the model being BLUE. The diagnostic tests include Hausman test, autocorrelation, stationarity, normality test, heteroskedasticity, multicollinearity, Cronbach test and model specification test. The explanatory variables influenced the dependent variable to the extent of 19.08%. Director's age and board size returned negative correlation with the dependent variable while female directors returned a positive correlation with the dependent variable ROA.



## **CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents a summary of the study reflecting on the finding's implications based on the research objectives. The literature reviewed was expounded on the four theories in chapter two that are aligned to the relationship between corporate governance and the financial performance of SMEs. In addition, the empirical literature has also been cited as discussed in the empirical literature section of chapter two. The chapter was organized as follows: first was the discussions and findings of each specific objective, conclusions about the findings, recommendations on the study and the limitations the researcher encountered during the study and the areas recommended for further study.

### **5.2 Discussions of the Findings**

#### **5.2.1 Analysis of Corporate Governance Attributes on Top 100 SMEs in Kenya**

This section discusses the findings of the analysis of corporate governance attributes of board gender, board size and directors' age.

##### *5.2.1.1 Board Gender*

The findings revealed that 5% of the SMEs did not have a female director. The maximum number of female directors was five and the mean was two implying that on average the SMEs had two female directors. From the analysis, 50% of the SMEs met the threshold of one third female directors in the board as per the Kenyan constitution. 5% of the SMEs had a female board chair. 27% of the SMEs had a policy in place regarding gender composition at the board level. These results are contrary to the analysis of corporate governance information on SMEs in Kenya where on average there was one female director. These results contradict the study of Pangestu, Gunawan, & Wijaya (2019) who found out that the board had 12.35% of female directors with a maximum of one female director and a minimum of zero. James (2021) reported that gender of the board chairperson, internationally, most boards had 3.0% female chairpersons. According to the survey responses, it was noted that women constituted 21% of the board chairpersons. Similarly, Horváth & Spirollari (2012) reported that most boards were male dominated and on average the number of women in the boards did not exceed two with a standard deviation of one. There were many boards without female directors with the maximum number of woman in the board at six. Women did not have majority in any firm as there were only one firm that had 50% of women in the board (Horváth & Spirollari, 2012).

Different jurisdictions have different rules on board gender composition as well as different implementation stages of board gender composition thus giving contradicting results. SMEs are not mandated to adhere to the gender composition like listed companies. Lack of mandatory implementation of gender composition makes the results contradicting

#### *5.2.1.2 Board Size*

The results revealed that the maximum board size was ten board members which was represented by 5% of the SMEs while the minimum size was two board members. The average board size was five board members. The board size was contrary with the analysis of corporate governance information on SMEs in Kenya where the board size was on average four board members. 81% of the SMEs that had more than five board members. 24% of the respondents that had more than five board members were from the financial sector. The results agreed with Ismail & Tarofder (2015) who studied how the adoption of corporate governance structures affects the performance of SMEs in Sri Lanka. The study found out that the average board size for the SMEs was four. The results agreed with Assenga (2021) who reported an average of six board members with a minimum of three and a maximum of eleven. On the contrary, Horváth & Spirollari (2012) reported that the average directors was eleven who served in the board with a standard deviation of 2 directors. The minimum size of the board was five members with a maximum of eighteen. A study by Saidat et al. (2017) also contradicted this study. Their findings were a mean board size of eight with a minimum of 5 board members and a maximum of 13 and a standard deviation of 2.201.

#### *5.2.1.3 Directors Age*

The empirical results presented that the youngest director was forty-five years while the oldest director was sixty-six years. On average, the directors age was fifty-seven indicating that majority of the directors were above fifty-seven years old. 95% of the SMEs did not have age limit for the directors. The above results differed from the study of Pangestu, Gunawan, & Wijaya (2019) who revealed that female directors age was on average 47 with a maximum of 69 years and a minimum of 29 years. The results were in line with Horváth & Spirollari (2012) who reported that the average age of board members was 60 years with a standard deviation of three years while the youngest board member was 48 years old and the oldest at 70.

## **5.2.2 The Relationship Between Board Attributes and the Financial Performance of Top 100 SMEs in Kenya**

### *5.2.2.1 The Relationship Between Board Size and the Financial Performance of SMEs*

The findings of this research revealed that board size had a negative but significant relationship with ROA. This finding was supported by Susi & Lukason (2019) reported that large boards led to higher failure risk in SMEs.

On the contrary, Aktan et al. (2018) who reported that board size had a significant and positive relationship with ROA. (Puni & Anlesinya 2020, Hakimah, Pratama, Fitri, & Ganatri, 2019; Shettima 2018; & Aktan et al. 2018) all reported a positive relationship between board size and the financial performance of organizations. Hakimah et al. (2019) conducted a study in Indonesia on 50 SMEs and found out that board size was significant and positively correlated with profitability. A study done in Ghana for the period 2006-2018 on 38 listed firms found out that board size had a positive impact on a firm's performance (Puni & Anlesinya, 2020a). Mishra (2017) explored the relationship between board characteristics and firm performance in India on 391 companies listed at the National Stock Exchange for the years 2010-2014 and reported a positive association between board size and company's performance. The study used Tobin Q and ROA as measures of firm performance.

### *5.2.2.2 The Relationship Between Board Gender and the Financial Performance of SMEs*

The findings showed that female directors had a significant positive relationship with ROA. These results were in line with Minh & Pham (2020) whose results showed that gender significantly increased profitability of SMEs. Shehata et al. (2017) established that gender had a significant negative association with SMEs performance as measured by ROA. Hakimah, Pratama, Fitri, & Ganatri (2019) found out that board gender had a significant and positive influence of SMEs profitability. However, several researchers found out that female directors had a negative correlation with the performance of firms. Wachudi & Mboya, (2012) concluded that female directors had a negative correlation with the performance of commercial banks in Kenya. The negative results were also concurred by Shettima (2018) whose study indicated that female directors had a negative correlation with micro finance institutions' performance. Further, Herrera Cano et al. (2019) indicated that there was no significant relationship between female directors and the financial performance of forty published studies from twenty-eight countries.

### *5.2.2.3 The Relationship Between Directors' Age and the Financial Performance of SMEs*

The findings of this research revealed that directors age had a negative but insignificant relationship with ROA. These finding were supported by Susi & Lukason (2019) who revealed that the growth of managers age reduced failure risk in SMEs. Minh & Pham (2020) carried out a study on 810 SMEs in Indonesia for the year 2015 using logit regression model and found out that age negatively affected the profitability of SMEs.

On the contrary, Leighton (2008) conducted a study on 523 SMEs in Nigeria and reported that age influenced the growth of SMEs. Kautonen (2008) conducted a research in Finland on 839 small firms between 2000-2006 involving entrepreneurs in the age bracket of 50 and above and 20-49 years found out that survival rates of firms started by older entrepreneurs were higher compared to those of young entrepreneurs. Hashim (2014) found out that the performance of older workers was positively related to their and trainability. Afrifa (2013) found out a significant and positive association between Q ratio and CEO age. Tanveer, Akbar, Gill, & Ahmed (2017) revealed that age was related to business success positively. Alharbi, Yahya, & Ahmed (2018) found out that age of SME managers impacted SMEs positively. Afrifa (2013) analyzed 234 SMEs for a period of 10 years (2004-2013) and revealed that CEO age was significantly correlated with SMEs performance.

### **5.2.3 Management View on the Relationship Between Corporate Governance and the Financial Performance of Top 100 SMEs in Kenya**

On the functional boards improving the financial performance of SMEs, 26% of the respondents believed that functional boards improved the financial performance while 59%, 12% and 3% believed that functional boards improved, slightly improved and did not improve the performance respectively.

Regarding large boards improving the financial performance of SMEs, 33% of the respondent's believed that large boards highly improved the financial performance, 45% believed that large boards improved the financial performance while 22% believed that large boards slightly improved financial performance. This empirical finding was also supported by Puni & Anlesinya (2020a) who reported that large boards could become a resource for improving performance. Ali (2018) opined that large boards helped companies through connections with external parties like suppliers and business customers thus improving a firm's performance. Aktan et al. 2018 found out that having large boards significantly increased

firms' performance as board size improved ROA and ROE. Süsi & Lukason (2019) revealed that SMEs had a higher failure risk when their board sizes were large and experienced lower failure risk when their board sizes were smaller. They also pointed out that larger boards had little importance in SMEs.

32% of the respondents believed that small boards highly improved the financial performance of SMEs, 66% believed that they improved performance while 2% believed that small boards slightly improved SMEs financial performance.

15% of the respondents believed that SMEs board having female directors highly improved the financial performance, 22% believed that female directors improved the financial performance, 12% responded that female directors slightly improved the performance while 51% believed that female directors did not improve the financial performance of SMEs. This findings were supported by Arora & Singh (2020) who reported that the presence of women in boards of directors anticipates positive organizational results. Additionally, Makropoulos et al. (2020) found out that female directors increase a company's performance by bringing divergent reasoning, motivation and endorsement of values that lead to ethical decisions unlike male directors thus increasing a firm's performance. Shettima (2018) reported that women directors contribute to the process of making decisions hence improving shareholder's objective of maximizing wealth. Herrera-cano et al.(2019) concluded that there was no significant relationship between the number of women serving in boards of directors and financial performance of companies. Shehata, Salhin, & El-helaly (2017) concluded that there was a significant negative association between gender diversity and financial performance. Hakimah, Pratama, Fitri, & Ganatri, (2019) reported that board gender improved profitability of SMEs. Minh & Pham (2020) reported that female directors increased profitability of SMEs

### **5.3 Conclusions**

The study revealed that 95% of the SMEs had at least a female director but 50% of the SMEs did not have one third of the boards comprised of female directors. 95% of the SMEs had male board chairmen and 73% of the respondents did not have a policy on gender composition. Regarding the board size, all the respondents had boards with the highest respondent having ten board members and one respondent had two board members. 24% of the respondents that had more than 5 board members were in the financial services sector. 95%

of the respondents did not have the directors age limit. The youngest director was 45 years while the oldest director was 66 years with the average of 57 years.

The study concluded that 19.08% of the board attributes (board size, female directors, and directors age) which were independent variables influenced the dependent variable ROA. Board size and directors age had a negative but significant relationship while female directors had a significant positive relationship. The control variables that were liquidity, firm size and firm age influenced the independent variable (ROA) positively.

On the management's view regarding the relationship between corporate governance and the financial performance of SMEs, majority of the respondents at 59% believed that functional boards improved the financial performance of their entities while 45% believed that large boards improved financial performance. 51% of the respondents believed that female directors do not improve financial performance of their companies.

The theoretical linkages between corporate governance and the financial performance are captured as follows. Agency theory as well as resource dependency theory argue that the presence of women directors in corporate boards reduces information asymmetry thereby enhancing strategic linkages of the firms and eventually leading to financial performance improvement. Agency theory helps a firm improve its financial performance by tying agents to contracts that they must deliver. Issues like compensation of managers being pegged on performance of the company forces managers to work harder so as to get bonuses at the end of the year. Principals also opt to exercising the debt option as a source of financing so as to force managers to work harder and service the debt as well as keeping the cost of capital lower. Debt is a mechanism for reducing agency problem. Strong corporate governance would lead to the reduction in the agency issues of the firms and encourage the team of board of directors to work and operate in a much more transparent manner. The researcher concludes that gender diversity would be helpful in the reduction of agency costs for the firm, and this certainly have a bearing on the financial performance. The presence of women directors in majority numbers is likely to reduce agency costs as compared to the firms having token membership of women directors. The theory also postulates that the presence of women directors shall reduce the information asymmetry, which is one of the major causes of agency issues. Resource-dependence theory explains in the context of external capability of the firm for attraction, utilization, and generation of resources (Pangestu et al., 2021). A Board of directors are a major

part of assets because they carry more diversity in the form of education, background, experience, contacts and professionalism (Usman et al., 2019). Advocates of gender diversity argue that women have more ability to bring innovative ideas for business and have better communication skills that are necessary for board meetings (Hakimah, Pratama, Fitri, Ganatri, et al., 2019).

#### **5.4 Recommendations**

To the SME owners and managers, the researcher recommends for the establishment of a policy on gender composition as well as the limit on directors age. This recommendation is pegged on the results of this study given that 5% of the SMEs did not have a female director, 50% of the SMEs did not meet the threshold of one third (1/3) gender rule as per the Kenyan Constitution, only 5% of the SMEs had a board chair and 95% of the SMEs did not have a policy on age limit of directors. In practice, compliance with code of corporate governance for issuers of securities to the public 2015 traditionally lies with listed companies but this study recommends partial implementation of this code by top 100 SMEs. The partial implementation of this code will help top 100 SMEs to be compliant with issues like gender composition as well as age limit for directors.

To the academicians and researchers, a similar study can be done but with a higher sample size. A higher sample size can determine whether different results can be obtained. The study makes a significant contribution to the growing body of research on support of adoption of corporate governance by SMEs after changes in legislation like the 2010 constitution, the Companies Act of 2015 as well as the Insolvency Act of 2015. The findings give a feedback on the changes in legislation like the 2010 Kenyan Constitution, Companies Act of 2015 as well as the Insolvency Act of 2015 and how SMEs have implemented these legislations in terms of gender as per the 2010 constitution and size of the board given that the 2015 companies Act allowed for a minimum of one director for private companies. Again, a similar study can be done but with more board attributes as variables as well as with a longer period of time probably more than five years. The more board attributes as well as a longer period could yield different results from the ones obtained from this study.

To the Government and the Micro and Small Enterprises Authority (MSEA), the study reveals a gap on the list of registered SMEs. The researcher was not able to obtain a list of registered SMEs from MSEA as well as the Government Register (Office of the Attorney

General). The researcher advocates for these agencies to come up with a list of registered SMEs. One of the services under the MSEA service charter is the provision of governance skills to the MSE associations at a fee of Ksh 300 per official for a three-day training. The researcher advocates

for MSEA to provide training on governance skills for SMEs and not only MSE associations which are a group of micro enterprises or small enterprises. The researcher also recommends for MSEA to come up with minimum corporate governance requirements for SMEs to ensure governance mechanisms are adhered to by SMEs. This is as a result of the survey done by CMA & KNBS (2020) who found out that 55.3 percent of the SMEs revealed that they were not aware of the Capital Markets Authority corporate governance practices for issuers of securities to the public. The study emphasizes on designing a cost-effective discrete governance structure for SMEs than the prevailing corporate governance code for large firms. MSEA should carry out a research or survey on SMEs to establish the challenges faced by these SMEs and how these challenges can be solved to ensure SMEs are a going concern. The researcher also proposes to MSEA to encourage its members to participate in as respondents to students carrying out research on SMEs.

The researcher also recommends for the organizers of top 100 SME challenge (Nation Media Group and KPMG) to encourage these SMEs to support students and other research organizations on research matters. Again the researcher requests Government agencies like Micro and Small Enterprises Authority (MSEA), Kenya Association of Manufacturers and the Ministry of Trade to encourage SMEs to support and encourage research since some of the problems encountered in their daily activities could be solved by research.

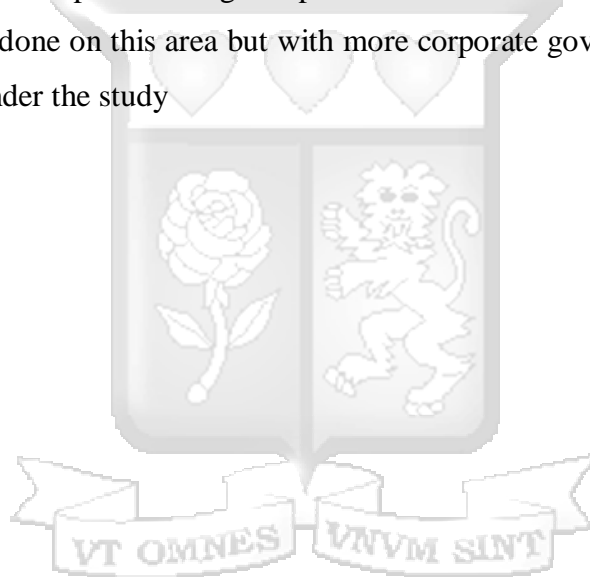
### **5.5 Limitations of the Study**

The researcher experienced difficulties in collecting data from the respondents. Out of the one hundred questionnaires that were issued out, twenty-two questionnaires were received. Majority (78 top 100 SMEs) of the respondents were not willing to give information regarding their companies (Ndagu, & Obuobi, 2010). This reluctance in filling in the questionnaire resulted in the data collection process consuming more time that the researcher had anticipated. There was no government agency that had a list of registered small and medium enterprises (SMEs) in Kenya at the time of this research. The researcher had to use a list of top 100 SMEs since the Micro and Small Enterprises Authority as well as the Registrar of companies did not

have a list of SMEs in Kenya. 87 companies did not have websites. Information in the company's directory was not sufficient for the researcher to gather enough communication channels with these companies. The information lacking in the directory was telephone numbers, email addresses as well as the physical location. This rendered these companies inaccessible due to lack of communication channels as well as lack of knowledge on the physical address of these companies.

### **5.6 Areas for Further Study**

More research can be done on family-owned SMEs to establish how corporate governance is implemented in family-owned businesses. Similar study can be done in future but with a higher sample size. A higher sample size might report different results from this research. Future studies could also be done on this area but with more corporate governance attributes as well as with more years under the study



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## APPENDIX 1: INTRODUCTION LETTER

Ole Sangale Rd, Madaraka Estate,  
P.O. Box 59857 00200, Nairobi, Kenya,  
Cell: +254 703 414/6/7, Twitter: @SBSKenya  
Email: [info@sbs.ac.ke](mailto:info@sbs.ac.ke) or visit [www.sbs.strathmore.edu](http://www.sbs.strathmore.edu)



1<sup>st</sup> December 2020

### **RE: FACILITATION OF RESEARCH – TONNY SIMIYU**

This is to introduce Tonny Simiyu who is a Master of Commerce (MCOM) Student at Strathmore University Business School, admission number MCOM/122736. As part of our MCOM Program, Tonny is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MCOM course. To this effect, Tonny would like to request for appropriate data from your organization.

Tonny is undertaking a research paper on “**IMPACT OF CORPORATE GOVERNANCE ON THE PERFORMANCE OF SMES IN KENYA.**” The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MCOM seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Caroline Tiara".

Caroline Tiara  
Manager – Graduate Programs.  
Strathmore University Business School.

Association of African  
Business Schools



Strathmore Business School is a Proud member of:



**AACSB**

## APPENDIX 2: NACOSTI LICENSE



REPUBLIC OF KENYA



NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 339989

Date of Issue: 26/May/2021

### RESEARCH LICENSE



**This is to Certify that Mr.. TONNY KILISWA SIMIYU of Strathmore University, has been licensed to conduct research in Nairobi on the topic: "ESTABLISHING THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN KENYA" for the period ending : 26/May/2022.**

License No: NACOSTI/P/21/10906

339989

Applicant Identification Number

Director General  
NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY &  
INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document,  
Scan the QR Code using QR scanner application.

## APPENDIX 3: ETHICAL APPROVAL



**Strathmore**  
UNIVERSITY

17<sup>th</sup> August 2021

Mr Simiyu Tonny,  
tonny.simiyu@strathmore.edu

Dear Mr Simiyu,

**RE: Establishing the Relationship Between Corporate Governance and the Performance of Small and Medium Enterprises in Kenya**

This is to inform you that SU-IERC has reviewed and approved your above SU-master's research proposal. Your application reference number is SU-IERC1063/21. The approval period is 17<sup>th</sup> August 2021 to 16<sup>th</sup> August 2022.

This approval is subject to compliance with the following requirements:

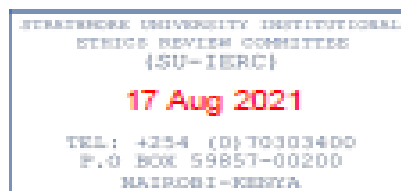
- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 48 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and also obtain other clearances needed.

Yours sincerely,

for: Dr Virginia Gichuru,  
Secretary; SU-IERC

Cc: Prof Fred Were,  
Chairperson; SU-IERC



## APPENDIX 4: QUESTIONNAIRE

### TITLE: A Questionnaire on Corporate Governance Effects on Financial Performance of Top 100 Small and Medium Enterprises in Kenya.

The information provided here will be used only for academic purposes. For this reason, the information provided will be treated with a lot of confidentiality and strict adherence to the ethical conduct.

#### **Instructions**

The questionnaire has six sections A, B, C, D, E and F. Kindly answer all the questions in each section.

#### **SECTION A: Organization's Background Information.**

		Please Indicate
1.	What is the name of your company?	
2.	What is your designation/ position?	
3.	What is the email address of your company?	
4.	What is the telephone number of your company?	

	Please Tick	0-3	4-6	7-9	Above 10
5.	How long has your firm been in existence since incorporation?				

6.	Please Tick	0-9	10-49	50-249	Above 250
	How many employees does your organization have?				

#### **7. What is the nature of your organization?**

		Tick		Tick	
1.	Financial Services		2.	Healthcare	
3.	Manufacturing		4.	Hotel/Food	
5.	Logistics		6.	Communication	
7.	Security		8.	Automobile	
9.	Information Technology		10.	Cleaning	
11.	Clearing & forwarding		12.	Tours and Travel	
13.	Education		14.	Construction	
15.	Real Estate		16.	Furniture	
17.	Agriculture		18.	Air Compressor Manufacturers & Dealers	

19.	Aluminium Fabricators		20.	Air Conditioning & Refrigeration	
21.	Apparel		22.	Audio Visual	
23.	Beauty		24.	Business & Management Consultants	
25.	Car Hire		26.	Carpet & Rug Dealers	
27.	Consultancy		28.	Education	
29.	Embroidery		30.	Energy	
31.	Entertainment		32.	Fire Safety, Prevention suppliers & Consultants	
33.	Human Resource		34.	Insurance	
35.	Marketing		36.	Promotional Branding & Merchandising	
37.	Rental & Leasing		38.	Retail	
39.	Stationery & Printing		40.	Safety Equipment & Services	
41.	Supplies		42.	Steel Fabricators & Products	
43.	Water		44.	Wholesale Shops	

8. Does your company have a company secretary?

	Yes	No
<b>Please Tick</b>		

**SECTION B: BOARD SIZE.**

9. Does your company have a board?

	Yes	No
<b>Please Tick</b>		

		1	2	3	4	5	6	7	8	9	Above 10
<b>10.</b>	How many board members did your organization have?										
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										
<b>11.</b>	How many directors were executive directors?										
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										
<b>12.</b>	How many directors were non-executive?										
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										

**SECTION C: BOARD GENDER**

<b>13.</b>	How many directors of your board were male?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Above 10</b>
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										
<b>14.</b>	How many directors of your board were female?										
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										
<b>15.</b>	How many female directors were independent non-executive?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Above 10</b>
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										
<b>16.</b>	How many female directors were executive?										
	Year 2015										
	Year 2016										
	Year 2017										
	Year 2018										
	Year 2019										

		<b>Yes</b>	<b>No</b>
<b>17.</b>	Is the chair of the board female?		
<b>18.</b>	Is there a policy regarding gender composition in your company?		

**SECTION D: DIRECTORS AGE**

<b>19.</b>	What was the biological age of the oldest director in your company during the years 2015-2019?	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	20-25					
	26-30					
	31-35					
	36-40					
	41-45					
	46-50					
	51-55					
	56-60					
	61-65					
	66-70					
	Above 70 years					

**20.** How many directors are aged 40 years and below, between 41-49 years and above 50 years? Please indicate below.

	<b>0</b>	<b>1-3</b>	<b>4-6</b>	<b>7-9</b>	<b>Above 10</b>
<b>40 Years &amp; Below</b>					
<b>41-49 Years</b>					
<b>50 Years &amp; Above</b>					

**21.** What is the maximum age limit of a board member in your company?

	<b>50-55</b>	<b>56-60</b>	<b>61-65</b>	<b>66-70</b>	<b>Above 70</b>
<b>Please Tick</b>					

**22.** How many years of experience does your most experienced director have?

	<b>0-3 Years</b>	<b>4-6 Years</b>	<b>7-9 Years</b>	<b>Above 10 Years</b>
<b>Please Tick</b>				

Please indicate the level of your agreement with the following statements by ticking the appropriate box.

\*\*\*Old aged directors imply 50 years and above.

\*\*\*Young, aged directors imply 40 years and below.

		Highly Improve	Improve	Slightly Improve	Does not Improve
23.	Do old aged directors improve the financial performance of your company?				
24.	Do young aged directors improve the performance of your company?				
25.	Do young directors' investment in long term projects improve the financial performance of your company?				
26.	Do old aged directors' favour for high-risk investment decisions improve the financial performance of your company?				
27.	Do young aged directors' favour for high-risk investment decisions improve the financial performance of your company?				

**SECTION E: Management view on the relationship between corporate governance and the financial performance of SMEs.**

How does the below statements affect the financial performance of your company?

Please indicate the level of your agreement with the following statements by ticking the appropriate box

		Highly Improve	Improve	Slightly Improve	Does not Improve
28.	Large boards experiencing difficulty when making decisions				
29.	Large boards with diverse skills				
30.	Independent non-executive directors				
31.	A large board that has lost coordination				
32.	Large boards facing communication challenges				
33.	Small boards that make quicker decisions				
34.	Small boards with less effective monitoring of agents (managers)				
35.	Large boards with free riding (shirking) behavior among the directors.				
36.	Do functional boards improve the financial performance of your company?				

37.	Do large boards improve the financial performance of your company?				
38.	Do small boards improve the financial performance of your company?				
39.	Do female directors improve the financial performance of your company?				

40. How can your company ensure good corporate governance is established successfully in order to achieve sound financial performance?

Please indicate the level of your agreement with the following statements by ticking the appropriate box.

	Highly Improve	Improve	Slightly Improve	Does not Improve
Establishing a governance committee within the board				
Measuring the performance of the board annually or semi-annually				
Ensuring transparency and accountability within the company				
Establishing codes of ethics and conduct				
Separating the role of Board Chairman and CEO				
Having sound Internal Control System				
Having a sound Internal Audit Department				
Establishing an Audit Committee within the board				

**SECTION F: FINANCIAL INFORMATION**

41. What is your organizations Net Income, Total Assets, Current Assets and Current Liabilities for the past five years (2015-2019)? Please indicate in the table below.

	NET INCOME	TOTAL ASSETS	CURRENT ASSETS	CURRENT LIABILITIES
YEAR 2015				
YEAR 2016				
YEAR 2017				
YEAR 2018				
YEAR 2019				

**Thank you for your response.**

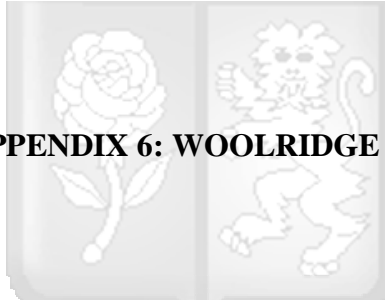
## APPENDIX 5: HAUSMAN TEST

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
dage	-.0664234	-.0500896	-.0163339	.0830858
bs	-1.108508	-.0841973	-1.024311	.3976763
fedi	2.338312	.0370391	2.301273	1.060985
liq	.0195687	.0113279	.0082408	.0056044
fs	.0866649	.06406	.0226049	.0237003
fage	.0326336	.0234745	.0091591	.0830764

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(6) = (b-B)'[(V b-V\_B)^(-1)](b-B)  
 = 13.34  
 Prob>chi2 = 0.0379  
 (V\_b-V\_B is not positive definite)



## APPENDIX 6: WOOLRIDGE TEST

FE (within) regression with AR(1) disturbances	Number of obs	=	88
Group variable: id	Number of groups	=	22
R-sq: within = 0.1679	Obs per group: min	=	4
between = 0.3084	avg	=	4.0
overall = 0.1078	max	=	4
corr(u_i, Xb) = -0.4964	F(6, 60)	=	2.02
	Prob > F	=	0.0771

roa	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dage	-.0141805	.2006261	-0.07	0.944	-.4154925	.3871314
bs	-1.342638	1.347945	-1.00	0.323	-4.03893	1.353655
fedi	3.869275	3.443426	1.12	0.266	-3.018603	10.75715
liq	.0121039	.0298757	0.41	0.687	-.0476563	.0718642
fs	.0850473	.0433512	1.96	0.054	-.001668	.1717627
fage	-.0372779	.1967665	-0.19	0.850	-.4308695	.3563136
_cons	1.96397	5.777941	0.34	0.735	-9.593633	13.52157
rho ar	.340612					
sigma_u	.06772225					
sigma_e	.28091058					
rho_fov	.05492773 (fraction of variance because of u_i)					

F test that all u\_i=0: F(21, 60) = 0.22 Prob > F = 0.9999

## APPENDIX 7: HETEROSKEDASTICITY TEST

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of roa

chi2(1)      =      2.88
Prob > chi2  =      0.0895
```

## APPENDIX 8: SKEWNESS/KURTOSIS TEST FOR NORMALITY

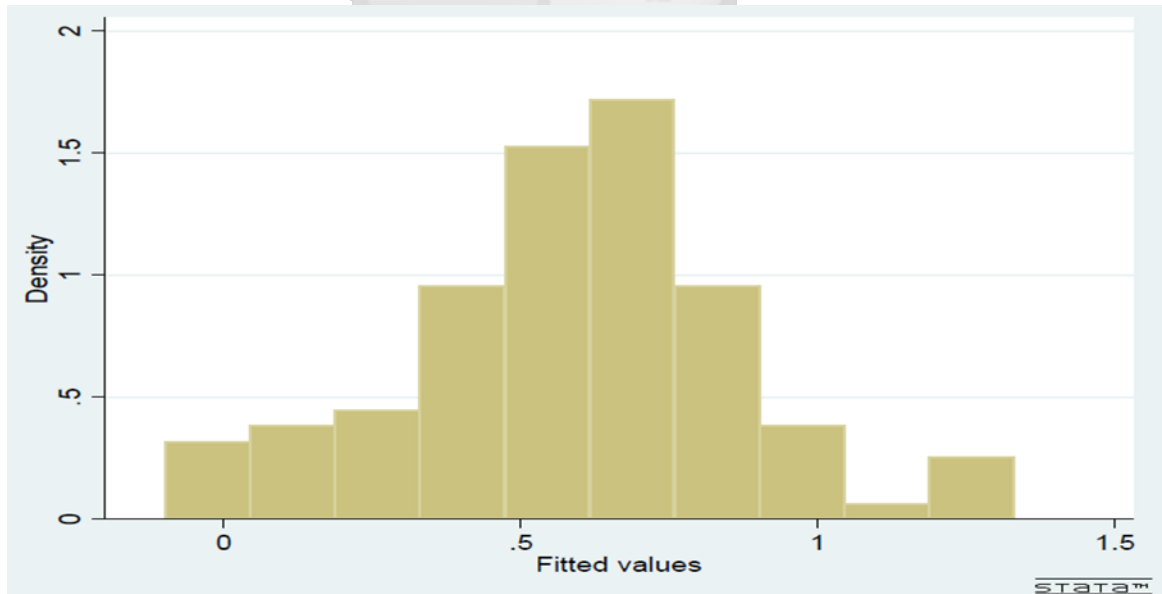
Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
residuals	110	0.6347	0.2595	1.53	0.4656



```
Doornik-Hansen          chi2(2) =      2.207   Prob>chi2 =      0.3318
```

## APPENDIX 9: HISTOGRAM FOR NORMALITY TEST



## APPENDIX 10: FIXED EFFECTS MODEL

Fixed-effects (within) regression	Number of obs	=	110			
Group variable: id	Number of groups	=	22			
R-sq: within = 0.1902	Obs per group: min	=	5			
between = 0.0000	avg	=	5.0			
overall = 0.0001	max	=	5			
	F(3,21)	=	.			
corr(u_i, Xb) = -0.9501	Prob > F	=	.			
(Std. Err. adjusted for 22 clusters in id)						
roa	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
dage	-.0664234	.0226552	-2.93	0.008	-.1135375	-.0193094
bs	-1.108508	.0106487	-104.10	0.000	-1.130653	-1.086363
fedi	2.338312	.1370795	17.06	0.000	2.05324	2.623384
liq	.0195687	.0118334	1.65	0.113	-.0050403	.0441776
fs	.0866649	.0146254	5.93	0.000	.0562497	.1170802
fage	.0326336	.0136793	2.39	0.027	.004186	.0610812
_cons	5.03302	1.178899	4.27	0.000	2.581365	7.484675
sigma_u	2.3063334					
sigma_e	.25845932					
rho	.98759719	(fraction of variance due to u_i)				

## APPENDIX 11: DETAILS OF QUESTIONNAIRE RESPONDENTS

Top 100 SMEs with websites	173
Top 100 SMEs without websites	87
Top 100 SMEs with websites and functional contacts	100
Top 100 SMEs with websites but dysfunctional contacts (Email or Phone Numbers)	73
Top 100 SMEs with dysfunctional directory contacts	15
Population	260

## APPENDIX 12: SUMMARY OF FREQUENCY PARTICIPATION

YEARS OF PARTICIPATION	SMES FREQUENCY	TOTAL SMEs
5	9	45
4	20	80
3	35	105
2	74	148
1	122	122
TOTAL	260	500



**APPENDIX 13: POPULATION ELEMENTS AND THEIR FREQUENCIES FOR THE PERIOD 2015-2019**

	<b>Company</b>	<b>Frequency</b>			
			28	BTB Insurance Brokers	1
1	A One Trading Kenya Ltd	1	29	Canon Aluminium Fabricators Ltd	1
2	Advanta Africa	2	30	Care Chemists	2
3	Africa Practice	1	31	Chequered Flag Ltd	1
4	Africert Limited	1	32	Chester Insurance Brokers	1
5	Agoma Group Limited	1	33	Circuit Business Systems	2
6	Airtouch Cooling Systems	1	34	Citrolam Contractors Limited	1
7	Allwin Agencies	4	35	City Walk Ltd	1
8	Alpha Fine Foods	1	36	Classic Mouldings	3
9	Amex Auto and Industrial Hardware	3	37	Coast Farmcare Agrovet Ltd	2
10	Amiken Ltd	1	38	Coast Industrial and Safety Supplies	1
11	Apollo Tours and Travel Ltd	1	39	Coastal Image Technologies	2
12	ARK Construction	1	40	Compulynx	2
13	ASA Ltd	1	41	Computer Pride	3
14	Astral Industries	2	42	Cube Movers	1
15	Atlancis Technologies Ltd	1	43	D and G Insurance Brokers	1
16	Audio Visual Control Systems	1	44	Dakawou Transport Limited	1
17	Avtech Systems	3	45	Dalco Kenya (Dharamshi Lakhamshi & Co. Ltd)	1
18	Babs Security Services Ltd	1	46	Dana Ent Ltd	1
19	Bagda's Auto Spares	5	47	Dataguard Distributors	2
20	Bell Atlantic Communications	1	48	De Ruiters East Africa	4
21	Bella Safaris Limited	2	49	Deepa Industries	1
22	Belva Digital Limited	1	50	Design Partnership Limited	1
23	Bilashaka Flowers Limited	1	51	Devsons Industries	1
24	Bimas Kenya Ltd	2	52	Diamond Property Merchants	2
25	Bluekey Seidor (K) Ltd	5	53	Digital City Ltd	1
26	Bonfire Adventures and Events	1	54	Dune Packaging	1
27	Boogertman and Partners Architects	1			

55	East Africa Tea Trade Association	1
56	East African Business Company Ltd	1
57	Eco Steel Africa Ltd	2
58	Economic Industries	3
59	Edn George East Africa	1
60	Educate Yourself	3
61	Elida Tours & Safaris Ltd	1
62	Elite Offset Limited	1
63	Elite Tools	2
64	Emmerdale	2
65	E-momentum Interactive Systems	2
66	Enkavilla Properties Ltd	1
67	Enwealth Financial Services Ltd	1
68	Eurocon Tiles Products Ltd	3
69	Executive Healthcare Solutions	5
70	Exon Investments	2
71	Express Company	4
72	Faha Graphics Enterprises Ltd	1
73	Farmal General Merchants Ltd	1
74	Farmers Fresh Feeds Ltd	1
75	Farmparts	3
76	Fayaz Bakers	4
77	Fincredit/AAR	2
78	Flexoworld Ltd	1
79	Floor Décor Kenya Ltd	2
80	Furniture Rama	2
81	Gachichio Insurance Brokers	1
82	General Automobile Corporation	2
83	General Cargo Services	5
84	Gina Din Corporate Communication	1

85	Glory Cab Hire Tours & Safaris Mombasa Ltd	1
86	Goodman Agencies Ltd	2
87	Graceful Restaurant	1
88	Hajar Services	3
89	Haji Motors Ltd	1
90	Hipora Business Solutions	3
91	Hi-Tech Inks and Coating Ltd	1
92	Homescope Properties	1
93	Hospitality Systems Consultants	1
94	Hotel Waterbuck Ltd	4
95	Hydro Water Well	2
96	I Spy Africa Limited	1
97	Ideal Manufacturing Company	4
98	Imexolutions Ltd	1
99	Impax Business Solutions	3
100	Index Modern Living	1
101	Iron Art	2
102	Isolutions Associates Ltd	3
103	Izmir Enterprises	2
104	Jamii Autocare	1
105	Jeff Hamilton	1
106	Jo World Agencies	1
107	Jogian Interlink	1
108	Kaesar Compressors Ltd	1
109	Kandia Fresh Produce Suppliers	2
110	Kenbro Industries	3
111	Kencont Logistics Services	2
112	Kenya Bus Services Management	3
113	Kisima Drilling East Africa	3

114	Kisima Electro Mechanicals	3	144	Napro Industries	2
115	Komal Construction Company	3	145	Nationwide Electrical Industries	5
116	Kurrent Technologies Ltd	1	146	Nationwide Power Systems Ltd	1
117	Lachlan Kenya Ltd	1	147	Natural World Kenya Safaris Ltd	1
118	Lean Energy Solutions	2	148	Ndugu Transport Company	3
119	Lekha Trading Company Ltd	1	149	Neelcon Construction Services Ltd	1
120	Logistics Link	1	150	Newline Office Furniture	3
121	Logistics Solutions	2	151	Norda Industries	3
122	Lota Automobiles Ltd	1	152	North Star Cooling Systems	5
123	Machines Technologies	5	153	Nova Industries Ltd	2
124	Magnum Engineering & General Ltd	1	154	Novel Technologies East Africa	3
125	Mandhir Construction	4	155	Nywele Creatives	1
126	Manix Ltd	2	156	Octagon Pension Services Ltd	2
127	Maridady Motors Ltd	1	157	Office Dynamics	3
128	Maroo Polymers	3	158	Oil Seals and Bearings Centre	3
129	Master Fabricators	4	159	Orange Pharma	4
130	Mc Builder Limited	1	160	Orbit Engineering	3
131	Melvin Marsh International Ltd	2	161	Palmhouse Dairies	4
132	Metco Limited	1	162	Parshva Ltd	2
133	Mic Global Risks Insurance Brokers	5	163	Pathcare Kenya	3
134	Millbrook Garment	1	164	Patmat Bookshop	2
135	Mojo Productions Limited	1	165	Pharmaken	1
136	Morison Engineering Ltd	1	166	Phat! Music and Entertainment	1
137	MPPS 1998 Ltd	2	167	Philafe Engineering Ltd	1
138	Mukurweini Wakulima D Ltd	1	168	Pindoria Holdings	1
139	Muranga Forwarders	1	169	Pinnacle Kenya Travel Ltd	2
140	Mutindwa Enterprises Ltd	1	170	Polucon Services	4
141	Myspace Properties Ltd	2	171	Polygon Logistics	2
142	Nairobi Garments Enterprises	1	172	Polyphase Systems Limited	1
143	Nairobi Enterprises Ltd	1	173	Power Governors	2

174	Powerpoint Systems	2	204	Software Technologies	4
175	Prafulchandra and Brothers	4	205	Soilex Prosolve Limited	1
176	Premier Industries Ltd	1	206	Sollatek Electronics Ltd	3
177	Professional Cleancare	1	207	Soloh Worldwide Interenterprises	3
178	Professional Digital Systems Ltd	1	208	Space and Style Ltd	1
179	Promo Kings Ltd	1	209	Specialised Aluminium Renovators	4
180	Questworks Ltd	2	210	Specialised Hardware	2
181	Quipbank Trust Limited	1	211	Specicom Technologies	2
182	R and R Plastics	1	212	Spenomatic Kenya	2
183	R World Enterprise Ltd	2	213	Spic and Span Cleaning Services Ltd	1
184	Ravenzo Trading	2	214	Statprint	2
185	Real Auto Spares Ltd	2	215	Super Broom Services Ltd	4
186	Reliable Concrete Works	1	216	Superior Homes Kenya	3
187	Retail Management Solutions Ltd	1	217	Supreme Pharmacy	1
188	Rift Valley Machinery Services	2	218	Synergy Gases	3
189	Riley Falcon Security	5	219	Synermedica (Kenya) Limited	3
190	Rongai Workshop & Transport Ltd	1	220	Tandu Alarms Systems Ltd	1
191	Roy Transmotors	2	221	Tangazoletu	1
192	RSA Kenya Ltd	2	222	TDF Group Ltd	2
193	Rup Pharm Ltd	1	223	The Arts Group Ltd	1
194	Rural Distributors Limited	2	224	The Makini School Ltd	2
195	Rushab Petroleum	2	225	The Scott Travel Group Ltd	2
196	Sensations	2	226	Thika Cloth Mills	2
197	Sheffield Steel Systems	4	227	Tikoo A Co. Ltd	1
198	Sideways Tours & Car Hire	1	228	Total Solutions	3
199	Sigma Supplies	1	229	Travel Care Limited	2
200	Silverbird Travel Plus	1	230	Trident Plumbers	3
201	Simba Technology Ltd	2	231	Tropikal Brands	2
202	Skypex Supplies	3	232	True Blaq Limited	2
203	Smart Brands	4	233	Typotech Imaging Systems	2

234	Ufanisi Freighters (K) Ltd	1	248	Vivo Active Wear	1
235	Uneek Freight Services	2	249	Warren Concrete	2
236	Uni Industries East Africa Ltd	1	250	Warren Enterprises Ltd	2
237	Unique Offers	2	251	Waterman Drilling Africa	3
238	United East Africa Warehouses	2	252	Waumini Insurance Brokers	1
239	United Engineering Supplies Ltd	1	253	Web Tribe Ltd/Jambo Pay	1
240	Username Investment Limited	1	254	Well Told Story	4
241	Valentine Cake House Ltd	1	255	Wotech Kenya	1
242	Valley Hospital	4	256	Xtreme Advenures Ltd	1
243	Varsani Brakelinings	4	257	Yogi Corp (EA) Ltd	1
244	Victoria Courts Trading Ltd	2	258	Zaverchand Punja Ltd	1
245	Vinep Forwarders	2	259	Zen Garden	2
246	Viscar Industrial Capacity Limited	1	260	Zimele Asset Management	2
247	Vivek Investments	2		<b>Grand Total</b>	<b>500</b>

Source: East Africa Top 100 mid-sized Companies Website. [Winners – EastAfricaTop100](#)

