

**EFFECT OF CORPORATE GOVERNANCE ON HEALTH  
CARE SERVICE DELIVERY IN SELECTED COUNTIES  
IN KENYA**

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the Degree of Doctor of Philosophy in Leadership and Governance  
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## DECLARATION

This thesis is my original work and has not been presented in any other University.

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## **DEDICATION**

To my late mum, my lovely husband, and our four children for their unwavering love, prayers, emotional, moral and financial support. May the Almighty God bless you for walking with me throughout my research journey.

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## **LIST OF ABBREVIATIONS & ACCRONYMS**

<b>CHMT</b>	County Health Management Team
<b>CIPD</b>	County Integrated Development Plan
<b>COB</b>	Controller of Budgets
<b>CRA</b>	Commission on Revenue Allocation
<b>DHMT</b>	District Health Management Boards
<b>DANIDA</b>	Danish International Development Agency
<b>GOK</b>	Government of Kenya
<b>GIZ</b>	German International Cooperation
<b>KHSSP</b>	Kenya Health Sector Strategic and Investment Plan
<b>MOH</b>	Ministry of Health
<b>MOMS</b>	Ministry of medical services
<b>NPM</b>	New Public Management
<b>PFM</b>	Public Financial Management
<b>NED</b>	Non-executive directors
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>PHMT</b>	Provincial Health Management Team
<b>PMA</b>	Performance Monitoring Accounts
<b>SNA</b>	Sub- National Agencies
<b>SWAp</b>	Sector-wide Approach

<b>SDG</b>	Sustainable development goals
<b>TFDG</b>	Task force on Devolved Government of Kenya
<b>UN</b>	United Nations
<b>USA</b>	United States of America
<b>USAID</b>	United States Agency for International Development
<b>WB</b>	World Bank
<b>WDR</b>	World Development Report
<b>WHO</b>	World Health Organization

## DEFINITION OF TERMINOLOGIES

**Corporate Governance:** The system of rules, practices, and processes by which a company is directed and controlled (OECD, 1999).

**County Health Management Team:** A professional and technical structure tasked with coordinating the delivery of the constitutionally defined county health services through the network of health facilities in their respective counties (Kenya Health Policy Framework 2013- 2030)

**Devolution:** A process of transfer of political power, administrative and fiscal management powers between central governments and lower levels of government, primarily operating at city and region levels (Bennett, 1990).

**Level 5 Hospital:** These are Tertiary care hospitals found at the county level. They are the highest category in county (National Health Sector Strategic Plan II)

**Public Services:** Public service delivery as anything provided to the citizens by the government (Eigeman, 2007)

**Policy:** A statement by the government of what it intends to do such as law regulation, ruling, decision, order, or a combination of these (Birkland, 2015).

**Service Delivery:** The provision of a service or a product by a government to the citizens (Fox & Meyer, 1995)

## ABSTRACT

Corporate governance is vital to the improvement of health care service delivery in Kenya. When implemented effectively, it can avert corporate scandals, fraud, and criminal liability. It also improves an institution's perception as a self-policing institution that is responsible. Similarly, weak accountability can negatively affect continuity of service delivery and result in other inefficiencies. Accordingly, steady revenues ensure that governments maintain efficient delivery of public services. Indeed, access to quality health care for all has been a long-term plan in developed and developing countries. Kenya has undergone significant changes from 2010 to improve its public service delivery with the latest being devolved governments that envisage bringing services closer to the people. This purpose of this study was to investigate the effect of corporate governance on health care service delivery. The study sought to examine the role County Health Management Team plays in the provision of health care service delivery. Further, the study examined the interface between board size, chief executive officer duality, accountability structures and allocation of resources – to establish their influence on health care service delivery. The study hypothesized that, board size, chief executive officer duality, accountability structures and allocation of resources affects service delivery. The target population was 347 comprising of senior county administrators, clinical officers, nurses, and doctors, at Level 5 hospitals. The study adopted a descriptive research design. The study collected quantitative data using questionnaires and qualitative data open ended section of the questionnaire. The data was analyzed using descriptive statistics generated from Statistical Software for Social Sciences (SPSS) and the qualitative data was analyzed using content analysis. The independent variable comprises of board size, CEO duality, accountability structures and allocation of resources. The moderating variable was policy framework and comprised international conventions, intergovernmental mechanism, and administrative transformation. Dependent variable comprised of accessibility and efficiency of health care services and citizen participation. Further, the study employed multiple regression models for analysis quantitative data collected through use of questionnaire. The result suggests that board size, chief executive officer duality, accountability structures and allocation of resources affects health care service delivery. Other findings from the study confirmed that; board size have a significant effect on health care service delivery. The result disputed the null hypothesis on board size and concluded that board size affects health care service delivery. Other findings indicate that that accountability structures have a significance influence on health care service delivery. Further, the study concluded that allocation of resources plays a significant role in the health care service delivery in Kenya. The study recommends that both National and County should put in place a set of deliberate and proactive processes, policies and structures that supports board size to improve health care service delivery. The study also suggests that statutory bodies should enact laws that will mandate all counties to maintain corporate governance.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The effects of corporate governance on health care service delivery have received attention in the academia, social, political, and economic literature. Corporate governance has become more complex and attracted considerable interests from both academic researchers and the public. The impact of accountability has been an underlying theme in the literature on public service delivery. Similarly, accountability has been a central theme in debates following the World Development Report (WDR) of 2004.

According to Mwabu et al (2001), centralized governments have for long delayed the effective delivery of public services in Kenya and other developing countries. Owino and Korir (2000) contends that the poor customer care has resulted into low staff morale, high turnover and increased cost.

Governance challenges coupled with frequent industrial actions by health care professionals in different counties as well as resignations of health care workers has negatively affected health care service delivery. Consequently, Tam (2005) opines this challenge has led to some patients looking for alternative service providers. He postulated that medical staff that the outcome of interact actions between patients may also negatively affect growth of hospitals. Likewise, Boshoff and Gray, 2004; Algılanan and Connor, 2003 argue that patient's perception of physical facilities and other processes may lead to poor service delivery. Conversely, Clarke and Dela Rama (2008) suggest need for structures in institutional management. This latter view has made corporate governance very critical in public institutions.

The health care service delivery constitutes a key component of national development and is central to planning, managing and delivering health care services

all counties in the world, including Kenya. Health care is central to sustainable development and achievement of Kenya Vision 2030. Indeed, health is both a resource and an outcome of sustainable development. Hence, sustainable development goals cannot be attained when there is a high incidence of poverty. In addition, health citizens are more efficient at enhancing knowledge and maintaining productivity for the betterment of a county in achieving universal health care for all.

Consequently, the World Health Organization (WHO) identified different blocks of a health care system. One of those building blocks was a governance structure and health care service delivery. The others are; Health Financing, well performing workforce, Pharmaceutical Management and Health Information Systems. Good governance provides purpose, resources, and accountability in support of management (Kibua & Mwabu, 2016)

Furthermore, a report by World Bank (2008) contends that low- and middle-income countries experience unequal health care services. In addition, shortage of drugs coupled with poorly compensated workers leads to poor service delivery. Similarly, a study done by Institute of Economic affairs in Busia County argues that most of the respondents thought that public health facilities was poor (IEA, 2013). Given this negative impact on society, it is time to change the way we view corporate governance and its effects on health care service delivery. Indeed, the provision of quality health care services delivery is attributed to inadequate knowledge and skills compounded by broader system failures and low staff numbers. A World Health report (2006) suggests that there is an urgent requirement to tackle inadequate Human Resources as part of supporting health systems.

Consequently, a study by Bunjra (2009) opines that providing health care services a perquisite for development of any country. According to Ennis and Harrington (2001) health care service quality is critical in ensuring patient satisfaction and loyalty. Hence, poor corporate governance can negatively affect health care service delivery especially in the running of public resources and hinder the achievement of sustainable economic growth (Controller of Budget, 2016)

According to a report by Milhaupt, Pargendler (2017) the United States asserts as the principal architect of best practices in matters of corporate governance. In their paper (2017) stipulates the USA's corporations were viewed as dangerous concentrations of power and their corporate governance was about federalism. They concluded that one significant consequence of this historical perspective is that corporate law in the United States is mainly the province of the states, not the U.S. Congress. Likewise, Bossert, (2000) postulates that improving governance leads to strengthening health service delivery. Additionally, poor corporate governance undermines rules and regulations, transparency and can lead to poor health care service delivery. All in all, many authors Carney and Gedajlovic, 2001; Estrin, 2002; Frydman, Gray, Hessel, and Rapaczynski, 1999; Meyer, 2004; Young, Peng, Ahlstrom, and Bruton, 2002 postulate that corporate governance is key outcome in successful economies. In addition, investors have identified corporate governance as a key factor affecting at their willingness to invest in an institutional environment (Gibson, 2003). Hence, implementing effective corporate governance is a key issue in development.

The aim of legitimately elected governing structures is to enhance the quality of health initiatives in a county (Kaseje, & R Nyawa, 2003). The key elements include internal resources, authority to contribute to decision-making and partnership engagement. According to Oyuya (2013) developing countries should aim to improve the quality of services. In addition, Abelso (2006) noted that there is need to establish structures closer to service users to ensure inclusion of community representatives in decision-making.

Moreover, Claussens and Yurtoglu (2013) noted that board structure is a crucial component in government mechanism especially in developing countries where there are weaker controls. Boards of directors are an important focus of policy responses to corporate scandals. Indeed, board diversity can significantly affect performance (Anderson et al., 2011; Ferreira, 2010). Moreover, Dent, (2003) studied service delivery processes and concluded that a hospital with networks of professional's groups were affected by politics and attitudes in professional management relations.

Further, Ferrira, (2010) noted that the background and skills of directors are important resources to the firm. Given this recent experience, unless boards take seriously the call to improve their performance and accountability to stakeholders' history will cast them as part of the problem, rather than the solution. A board is accountable for setting strategic direction for organization through board reviews and ratification of management proposals (Brennan, 2010).

As a result, the World Health Organization is the custodian of the world policies on health matters. It has 194 Member States of which Kenya is a member and its main function is to determine the policies to govern service delivery in the health sector. The right to health is important to all Member States: every State has endorsed the right to health through ratification of Universal Declaration of Human Rights 1948. Accordingly, States have committed themselves to protecting this right through codification of domestic laws and policies (WHO, 2000).

On the contrary, according to World Health Organisation, the African Region has the heaviest burden of disease. Mwaniki DL and Dulo CO (2008) opined that the outcome was created by the Structural Adjustment Programmes formulated in the 1990s. Equally, Corkery, 2000; Kenyesigye and Sseddyona, 2003 contends that SAP required a freeze on staffing for all public health workers and mandatory staff retrenchments. On the other hand, Kjaer, (2004) affirms that effective policy coordination and implementation largely depend on effective governance.

Accordingly, in September 2015 the UN General Assembly adopted the 17 Sustainable Development Goals (SDGs). According, the centrality of corporate governance in SDG is recognized. Similarly, 2014 UNDP report contended that the quality of governance plays a major role in supporting the pillars of the SDGs. Further, the right to health is recognized ever since the birth of the United Nations (UN) in 1945. According to the World Press, (1985) the African Member States approved that the district becomes the focus for health expansion.



In practice, health and disease know no borders. Hence, in 1987, Ministers in charge of health docket in African Region adopted the Bamako Initiative. For instance, the basic intent of the Bamako Initiative was to provide long-term sustainability of primary health care by strengthening community mobilization and using community resources and strengthening district level health care services. Indeed, a study by WHO in 2000 concluded that of the six WHO regions in the world, Africa bears the biggest burden of disease. Hence, effective, and efficient implementation of national and local policies can reverse this trend. Consequently, Organisation for Economic Co-operation and Development (OECD, 1998) asserted that the move should be grounded on each countries priority areas at personal and community levels.

Generally, most states have committed to developing corporate guidelines and domesticate to fit their national environment. Most states are bound by one or more multilateral convention on health. Further, despite the fact that many states are now parties to major human rights treaties on health, many are not. However, the universal declaration remains the primary source of global human rights standards.

In recognition of the critical role the health plays in the development of a county, African Governments through the Abuja Declaration committed to allocate at least 15 percent of government funds for health. According to the Eastern Africa National Networks of AIDS Service Organisations Countries in the East African Community concurrently released their National budgets for the Financial Year 2015/2016 on the same day. It is worth noting that Kenya has had the lowest percentage expenditure spent on health (Eannaso, 2015). Recently, World Health Organization (WHO) (2016) statistics on spending shows that between 2009 and 2013, Kenya spent an average of 0.2 of her GDP on health research.

Further, there is inconsistency amongst the East African Countries in achieving Abuja Declaration of 15% government spending on health. In addition, donors and other nongovernmental organization funds some health initiatives. Hence, should government allocate less funds in areas funded by donors and other non-governmental organization? McIntyre, (2002) postulated that there should be strong

coordination between social policies and health policies in order to moderate social disparities in health.

According to a World Bank report done in 2010, Sri Lanka has achieved a remarkable health care service delivery because of devolution. This is attributed to successful implementation of a credible budget constraint for the hospital. Similarly, World Press (2008) opine that in translating existing policies into national plans Sub-Saharan countries, should also ensure that health programs receive adequate funding. This view is supported by the World Bank report done in 2000 that postulated that countries need to have clear policies to ensure that limited resources are spent in high priority areas. A World Bank Report released in 2005, postulated that the aim of a governance framework is that the delivery of services requires strong relationships of accountability between the actors in the health care service delivery chain. Shah and Thompson, (2004) contend that accountability improves delivery of basic services in Chile, Uganda and Cote d'Ivoire.

## **1.2 Statement of the Problem**

In Kenya, corporate governance is broadly recognized phenomenon in health care service delivery. The problems in health care affect all people regardless of their social and economic status. Many countries in the world, including Kenya has adopted corporate governance as a system that meets all these desirable attributes in order to improve the health of the population and efficiency of health care service delivery. The scope of the effort to implement corporate governance is daunting for governments in all countries. Researchers have generally shown that improved corporate governance may lead to better health service outcome (Siddiqi, Masud, et al., 2009). In Kenya, central government still dictate what regional structures should do or not do. If this is not addressed, it could undermine corporate governance and health care service delivery.

Accordingly, the promulgation of the Constitution 2010, all counties were expected to constitute County Health Management Teams (CHMT) to manage health care services in accordance with Part 2 Section 2 of the Fourth Schedule of the

Constitution (COK, 2010). However, there are many challenges linked to corporate governance in the Counties. Even though health care is a devolved function, National government still dictate what counties should do or not do. Accordingly, this has compromised the efficiency of health care service delivery by denying counties a closer match between corporate governance of public institutions and the desires and needs of local people.

Atupamoi, (2017) postulated that there existed a significant economic growth; nonetheless Kenya's health care service delivery remains underdeveloped. This may be as result of inadequate resources, lack of political good will and faltering commitments. Notably, county governments should also increase their efforts and commit more resources to improve the health care service delivery (Kyalo, Kimeli, & Evans, 2017). Report on devolution progress over the last five years, revealed that the health sector has undergone various transformations, developments, and challenges though there is no data on the consistency across counties.

Following the devolution of health care services in 2010, there has been a public outcry on poor corporate governance and the effectiveness of health care service delivery at county levels (COG, 2016). The Council of Governors' Devolution Conference held in Kisumu in early April 2015 observed that health care service delivery was not resourced as provided (COG, 2015). The Constitution 2010 provided for devolution of power and resources to the countries. Sebudubudu, (2010) contends that government institutions lack good governance practices, transparency and accountability in service delivery to the citizenry. After the promulgation of the Constitution 2010, Kenyans were optimistic that service delivery would improve (Kyalo, Kimeli, & Evans, 2017).. Other scholars in corporate governance studies focus on service accessibility and disregard other functional service dimensions such as accountability mechanisms (Opiyo, 2014). Thus, empirical evidence on the links between corporate governance and health care service delivery is evidently lacking (Atupamoi, 2017).

Further, access to health care service is a constitutional right. However, millions of Kenyans cannot afford to pay for health care services at public or private clinics. Barrow, (2017) posits that Coast Provincial General hospital is rated below average on most of the health care service attributes. Further, Health Policy in 2015 in the same county showed that County Health Management Teams various units and departments lacked coordination. (Kyalo, Kimeli, & Evans, 2017 ;Health Policy, 2015).

Whereas there has been an attempt to improve the health care service delivery in Kenya (Cok, 2010), it seems that not much has been achieved in improving health care service delivery and this is compounded by limited information on the factors that affect the health care service quality in Kenya. There is no known study focusing on the effects of corporate governance on health care service delivery; a gap this study seeks to fill. Empirical studies on formation and composition of County Health Management Team in line with the delivery of efficient health care services is lacking. It is also unclear on whether the County Health Management Team should be headed by the County Executive Committee referred to under Article 179 (2) (b) as responsible for Health care service delivery or a County Health Director. As a result, there is confusion on the operationalization of the County Health Management Team in the counties. The counties have continued to experience challenge, which derailed their public performance and administrative operations (Mwogonzo, 2017)

All in all, despite the need to consolidate health care services delivery with adequate recurrent budgets, the trend shows that six counties allocated almost the entire budget to recurrent. The counties are Muranga, Nyeri, Taita Taveta Bomet, Embu, and Kericho (COB, 2017). Indeed, this is a contravention of Public Finance Management Act 2012 Sec.15 (2) (a) which requires that, a minimum of thirty per cent county government's budget be allocated to development expenditure. In addition, this is not in line with policy Circular No 10.MOH/ADM/1/90 of 2014. The researcher used the six counties to explore this research gap by investigating the

effects corporate governance, which inhibits efficient and effective health care service delivery. The study was motivated by the need to establish the effect of corporate governance in health care service delivery in Kenya.

### **1.3 Research Objectives**

The study was guided by the following objectives

#### **1.3.1 General Objective**

The study sought to establish the effect of corporate governance on health care service delivery in Kenya.

#### **1.3.2 Specific Objectives**

The specific objective of the study were -

1. To establish the effect of corporate governance on health care service delivery in Kenya to find out if board size influences health care service delivery in Kenya
2. To establish if CEO duality affects health care service delivery in Kenya
3. To establish if accountability structures practices affect health care service delivery in Kenya.
4. To establish if allocation of resources affects health care service delivery in Kenya
5. To examine if moderating effect affect policy framework on the relationship between corporate governance and health care service delivery.

### **1.4 Hypothesis of the Study**

The study derived the following research hypotheses:

**H<sub>01</sub>:** Board size has no significant effect on health care service delivery in Kenya

**H0<sub>2</sub>:** CEO duality has no significant effect on health care service delivery in Kenya

**H0:** Allocation of resources has no significant effect on and health care service delivery in Kenya

**H0:** Accountability structures has no significant effect on health care service delivery in Kenya

**H0:** There is no moderating effect on policy framework and health care service delivery in Kenya

### **1.5 Significance of the Study**

This study comes at the time when Kenya is undergoing political and administrative challenges from a centralized to a devolved governance system. The study would help the government to improve health care service delivery for citizens as envisaged in the Constitution of Kenya. Further, the study will help generate ideas for future replication in other settings.

#### **1.5.1 National Government Institutions**

The study will benefit Parliament, Intergovernmental Institutions, and Parastatals at understanding the effects of corporate governance on health care service delivery in Kenya. Moreover, it will support national government policy makers, county government policy makers, citizen, the business community, other non-state actors, and academia in understanding their role in improving health care service delivery and mitigating governance issues as they occur. In addition, it will assist policy makers in designing policies aimed at enhancing public service delivery.

#### **1.5.2 County Governments**

The study is significant to county governments since it identified the effects of corporate governance on health care service delivery. In addition, the assessment makes recommendations to address either positive or negative effects that may

influence health care service delivery. The study will help in building the existing policy frameworks regulations and health performance mapping. This study should help improve County health care policy. Moreover, the entire health care sector should benefit from the findings of this study to address challenges affecting the committee's work. The findings of the study could also be co-opted by managers of private health structures such as Nairobi Hospital, Aga Khan Hospital, Avenue healthcare and many others.

### **1.5.3. Academic Institutions**

To the scholars, the study will be of great importance to the researchers as they will gain both theoretical and practical experience on corporate governance issues and health care service delivery in Kenya. It will also be of great importance to academicians and future research as well as provide basis for future research on factors affecting health care service delivery in other counties. The study is important as it gives researchers exposure to a wider scope of knowledge that they can use in case they need to carry future research on similar topics. Further, these data will be used by policy makers and researchers to improve health care services in Kenya.

### **1.5.4 Development Partners**

This study will help the development partners who have heavily supported health care service delivery. Such partners will benefit by referring to the effects of corporate governance influence on health care service delivery.

## **1.6 Scope of the Study**

The study scope was limited to six counties namely; Nyeri, Taita Taveta, Embu, Muranga, Bomet and Kericho. The conceptual scope of this study was limited to six corporate governance constructs chief executive officer duality, accountability structures, allocation of resources. Policy framework was considered as a moderating variable while service delivery was the response variable. This may limit the

generalization to other counties. The period covered is 2010 to 2018 when the new Constitution was promulgated.

### **1.7 Limitation**

The researcher encountered challenges but they limitation did not have a significant interference with the outcome of the study. The study scope was limited to respondents drawn from six counties only. This may limit the application and generalization of findings to other counties. In addition, the period covered is rather short since health care service delivery has been recently decentralized following the promulgation of the Constitution 2010. Time factor was a limitation as the respondents took longer time than expected. It may be necessary to undertake more studies after long-term application to determine outcomes. The information generated would assist in improving health care service delivery. The implications discussed above did not have any material effect on the results and findings of the study



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents various existing theoretical and empirical literature by other scholars and researchers on corporate governance and health care service delivery. The chapter gives the conceptual model that shows the relationship between the dependent, moderating and independent variable and identify gaps in the literatures that the study addressed. This section will also assess the literature on board size, CEO duality, accountability structures, and allocation of resources and concludes with the summary of identified gaps.

#### **2.2 Theoretical Framework**

Theory is defined as a set of generalization that are made about variables and the relationship that are made among variables (Blumberg, 2008). This study focused on four theories, which the study was anchored. They include; the Resource Dependency Theory, Stakeholder Theory, Stewardship Theory and The Agency Theory.

##### **2.2.1 The Agency Theory**

This theory describes the relationship between the principal and the agency. The Agency Theory is also referred to as the Principal-agency theory and was developed in 1976 by Jensen and Meckling, states that managerial interests may not be aligned with the 'principals' but rather concerned with the maximization of their own monetary rewards. The agency relationship originates when a principal hires an agent to perform a service or to act on his behalf (Jensen & Meckling, 1976). The agency role refers to the governance function of the Board of Directors in serving the owners by approving the decisions made by the managers and monitoring the implementation of those decisions. Managers in a firm are agents of shareholders

who assume that the principle guiding them are those geared towards maximization of shareholders' wealth.

Malina (2013) argued that agency theory identifies the relationship where one party, the principal, delegates work to another, the agent. He states that agency theory regards the central problem of corporate governance as self-interested managerial behavior in a universal principal agent relationship.

Several studies have attempted to examine the Agency theory and corporate governance. Davis, Schoorman and Donaldson, (1997); Cornforth, (2003), postulate that the Agency Theory is the leading theoretical framework on governance research. This Theory is used in describing and analyzing governance reforms. The Agency Theory is the starting point whenever any debate is enduring on the topic of corporate governance and its mechanisms. Consequently, much debate on governance issues of business firms relies on the concept of agency emanating from the work of Adam Smith (1776) and Berle and Means, (1932) who identified the issue of separation of ownership and control in modern corporations and provided the base to understand the agency Theory assumptions, agency cost, use of incentives and control mechanisms.

In general, owners do not take active part in the operations of organizations. In fact, managers are hired to manage the firm's resources on behalf of shareholders. However, a problem arises when managers abandon the concerns of their principals and put their self-interests on priority line. Shleifer and Vishny, (1997) noted that this abandonment in agents' actions and principals' interests create agency problem. These include monitoring expenditures by the owners such as auditing, budgeting, control mechanism, incentives and compensation systems, bonding expenditures by the agent and residual loss due to interest difference between owner and agent (Jensen & Meckling, 1976). Further, Hart, (1995) noted that if firm is successful in mitigating the agency problem, the firm value increases.

This Agency theory is relevant to the study variable board size, number of members, diversity and composition and how it affects corporate governance in health care service delivery in Kenya. In addition, the Agency Theory was useful when evaluating the variable on accountability structures, access to information, quality of information and transparency. According to (Johanson & Ostergen, 2010) Agency Theory provides a useful insight into corporate governance.

This Theory is also important in understanding the service delivery variable. The principals are the citizens while managers as representative in decision-making organs are agents. This theory is applied to examine health care service delivery, accessibility of health care services efficiency of health care services and citizen satisfaction on health care service delivery.

### **2.2.2 Stakeholder Theory**

The stakeholder's theory was invented by Freeman, (1984) who argued that a stakeholder in an organization is any group or individual who can affect or is affected by the achievement of the organization's objective. This Theory stipulates that a corporate entity consistently seeks to provide a balance between the interests of its diverse stakeholders in order to ensure that each interest area receives some degree of satisfaction (Abrams, 1951). For example, a country thinking about improving service delivery may expect to have a balance between their own and that of the shareholders.

This Theory centers on the issues concerning the stakeholders in an institution or a county. It specifies that a corporate entity invariably seeks to provide of its diverse stakeholders in order to ensure that each interest constituency receives some degree of satisfaction Abrams (1951). In addition, Jensen (2002) criticized Stakeholder Theory for assuming single-valued objective regardless of firm's constituencies.

Moreover, Stakeholder Theory argues that the parties involved should include governmental bodies, political groups, trade associations, trade unions, communities, associated corporations, prospective employees and the general public. However, in

some situations opponents and prospective clients can be regarded as stakeholders to help improve business efficiency in the market place. Further, McDonald and Puxty (1979) proposed that companies are no longer the instrument of shareholders alone but exist within society and, therefore, has responsibilities to that society at large.

Furthermore, Freeman et. al. (2004) postulate that, economic value is created by people who willingly to get together and cooperate to improve the whole world position. According to Jensen, (2001) the critiques on the Stakeholder Theory is its assumption on a single-value objective. He proposes that the performance of a firm is not measured only by gains to its stakeholders; but other key issues such as flow of information from senior management to lower ranks, interpersonal relations, working environment, also play critical issues that should be considered

The key to the Stakeholder's Theory in understanding policy framework, international conventions, intergovernmental mechanism and administrative transformation. The rationale is to ensure that each Kenyan receives some degree of satisfaction

### **2.2.3 Stewardship Theory**

Several theories have been used to explain corporate governance. One such theory is Stewardship which was proposed by Davis, Schoorman and Donaldson (1997) and it argues that managers are stewards of the owners of a firm. Davis et al., (1997) defined a steward 'as one who protects and maximizes shareholders' wealth through firm performance and as such the steward's utility functions are maximized. In this perspective, stewards are company executives and managers working for the shareholders, they protect and make profit for the shareholders. Stewardship Theory argues that the managers of a company and stewards of the owners, both share common goals Davies et al., (1997). Accordingly, the board should play a supportive role by empowering executives to increase the potential for higher firm performance (Hendry, 2004; Shen, 2003). Likewise, Shen (2003); Sundaramurthy

and Lewis, (2003) posit that the Stewardship Theory should involve activities such as training, mentoring, and shared decision making between board and executives.

The stewardship view proposes that stewards are motivated when organizational success is achieved. Agyris, (1973) argues Agency Theory looks at an employee or people as an economic being, which subdues an individual's own ambitions. However, Stewardship Theory recognizes the importance of structures that empower the steward and offers maximum autonomy built on trust (Donaldson & Davis, 1991). It stresses on the position of employees or executives to act more autonomously so that the shareholders' returns are maximized. Indeed, this can minimize the costs aimed at monitoring and controlling behaviors Davis et al. (1997). Hence, the firm's performance can directly impact on the perceptions of individual and their performance.

According to Davis et al. (1997) management model contrasts sharply with the management model assumed in Agency Theory. The Stewardship Theory, rooted in sociology and psychology, attempts to define human relationships around behavioral model. Rather than assuming a divergence of principal and agent interests, Stewardship Theory postulates that instances in which a convergence of interests can occur, results in a more collaborative approach to governance.

Importantly, Fama (1980) contends that executives and directors are also managing their careers in order to be seen as effective stewards of their organization, whilst, Shleifer and Vishny, (1997) insists that managers return finance to investors to establish a good reputation so that they can re-enter the market for future firm performance and financial growth. Stewardship model have successfully worked in countries like Japan, where the Japanese worker takes ownership of their jobs. Further, stewardship Theory suggests a combining of the role of the CEO and the chairman so as to reduce in the organization.

At the center of the Theory's foundation is the concept that the business is here to serve rather than produce a profit (Larns, 2011). However, to be able to serve, the

firm must be able to sustain itself economically. Larson (2013) posits Stewardship promotes efficient use of resources through working with stakeholders. Further, he contends that profits are important funding mechanism to the primary objective of meeting the service-oriented mission. A stewardship theory ensures that a firm aligns itself with the needs of society and through risk taking and innovation, attempts to improve the life of others utilizing a business approach (Karns, 2011). This is supported by Larson, (2013) who posited that that managers are not motivated by personal needs and desires, but rather as stewards with the same motives and objectives as the owners of the firm. The pursuit of wealth building is secondary to service for the common good from sustainable business functions focused on the betterment of people and planet (Larson, 2013)

The Stewardship Theory posits that CEO wants to do a good job, to be a good steward of the corporate assets, that they have an inherent motivation, working diligently to achieve good corporate performance, with interests similar to those of the stakeholders (Brennan, (2010); Donaldson & Davis, (1991); Aras & Crowther (2007). Stewardship Philosophy has been framed as the organizational behavior counterweight to rational action theories of management (Donaldson & Davis, 1991; 1993). The Theory holds that there is no conflict of interest between managers and owners, and that the goal of governance is, precisely, to find the mechanisms and structure that facilitate the most effective coordination between the two parties (Donaldson, 1990). Importantly, since the groundbreaking work by Donaldson and Davis (1991), scholars have resorted to the Stewardship Theory of management as a basis for managers' and shareholders' philosophical alignment. This Theory, a sociological and psychological approach to governance, hinges on the assumption that executives feel a strong sense of attachment to and psychological ownership of their firm, and hence are more likely to behave as stewards. Moreover, Stewardship Theory holds that there is no inherent problem of executive control, meaning that organizational managers tend to be benign in their actions (Donaldson, 2008). The essential assumption underlying the prescriptions of Stewardship Theory is that the behaviors of the manager are aligned with the interests of the principals.

The Theory of stakeholder provided the researcher with insights when assessing how conflict of interest, board independence and audit meetings can affect health care service delivery in Kenya.

#### **2.2.4 Resource Dependency Theory**

The Theory portends that organizations could be dependent on resources in the external environment. Paetzold (2010) content that resource dependency theory focuses on the role that directors play in providing essential resources to an organization through their linkages to external environment. Thus, Boards of directors constitute an important mechanism for absorbing critical elements of environmental uncertainty into the firm. Further Williamson (1985) posit that environmental linkages or network governance could reduce transaction costs associated with environmental interdependency. The organizations require resources and these leads to the development of exchange relationships or network governance between organizations. Further, the uneven distribution of needed resources results in interdependence in organizational relationships. Several factors would appear to strengthen the character of this dependence, the importance of the resource(s), the relative shortage of the resource(s) and the extent to which the resource(s) is concentrated within the environment (Donaldson & Davis, 1991).

In addition, directors may serve to link the external resources with the firm to overcome uncertainty (Hillman, Cannella Jr & Paetzold, 2010). The resource dependency rule suggests that directors bring resources such as information, skills, key constituents, and legality that will reduce uncertainty (Gales & Kesner, 1994). According to (Hillman et al. 2010) consider the potential results of connecting the firm with external environmental factors and reducing uncertainty to decrease the transaction cost associated with external environment. This theory supports the appointment of directors to multiple Boards because of their opportunities to gather information and create networks in various ways.

Another important function of the board is the provision of resources (Nicholsen & Kiel, 2007). The Resource Dependency Theory concentrates on role of Board that help to secure and acquire the crucial resources of the organization by their external linkage to the environment. Through these linkages, it brings in different resources, such as information, skills, access to key constituents like suppliers of raw material, buyer of outputs, public policy makers, social groups as well as legitimacy Hillman et al. (2010). Hence, under this Theory, Board of Directors is the key source of various resources that different resources provision enhances organization operation, firm's performance and organizational life Daily, et al. (2003). Similar description was given by Ulrich and Barney (1984) who said that organizational performance is highly reliant on the power of a company to avail the required and scarce resources. They gave further explanation of the resources that are required by the company after making relationships with different parties who have access of those required bulk resources. Corporate performance can be judged by the efficiency and efficacy of the network and communication between contractual parties of firms. Several prior studies provide evidence that corporate Boards played important role in accessing the desired resources. Likewise, Salancik and Pfeffer (1978) and Dalton, Daily, Johnson, and Ellstrand (1999) found that without the help of corporate Boards it is difficult for organizations to acquire necessary resources. Further, diversity of Board members is seen as the essential element which leads towards the broader business connections (Siciliano, 1996; Waddock & Graves, 1997).

Johnson, Daily, and Ellstrand (1996) highlighted the main feature of Resource Dependence Theory. They said that independent directors on the Boards provide more assistance in gaining the desirable resources. As an outside director who is related to a law firm will provide the legal services and advises in the Board meetings with executive directors which is very costly for the firm to obtain otherwise. Directors have more linkages with the outdoor environment that is necessary for organization's survival and future growth (Hillman, et al., 2001). They further explained that Board of Directors bring resources for the firms namely necessary information, expertise, provide access to business stakeholders in which



key suppliers, customers, policy makers, legal advisors and social groups are on the top.

Resource Dependence Theory argues the availability of efficient skills of Boards that are involved in the accessibility of resources. The Resource Dependence Theory highlights another role of Board Director as the resource providers. In addition, Ruigork, Peck, and Tacheva (2007) considered the Boards as the boundary guards that shelter the necessary firm's resources like capital, knowledge, skills and projects partnership agreements. Moreover, Filatotchev, Gospel, and Jackson (2008) argued that the stewardship and stakeholder theories cover the restraining assumptions of the agency perspective, but still these theories do not provide the view of the corporate governance that make it associated with the diverse organizational environments. Boards are important boundary spanners that can be used as a mechanism to form links with the external environment. Inter-organizational linkages, such as the appointment of external Directors and Board interlocks, can be used to manage environmental contingencies. Directors who are significant in their professions and communities can be a source of timely information for executives. According to Pfeffer and Salancik (1978), when an Organization appoints an individual to a Board, it expects the individual to support the organizational goals and aspirations. This assistance is believed to raise organizational performance and increase returns to shareholders. Al Gamrh et al. (2020) assessed a corporate governance index by using various parameters for governance mechanism, such as the board of directors structure, the ownership structure, the market for corporate control and market completion. The result illustrates a positive impact on financial performance measure by market to book value equity and economic value added.

This resource dependency theory is important in understanding the variable on allocation of resources, quality of information and transparency. The Theory advocates for availability of efficient skills of Boards that are involved in the accessibility of resources to improve health care service delivery. It will also be

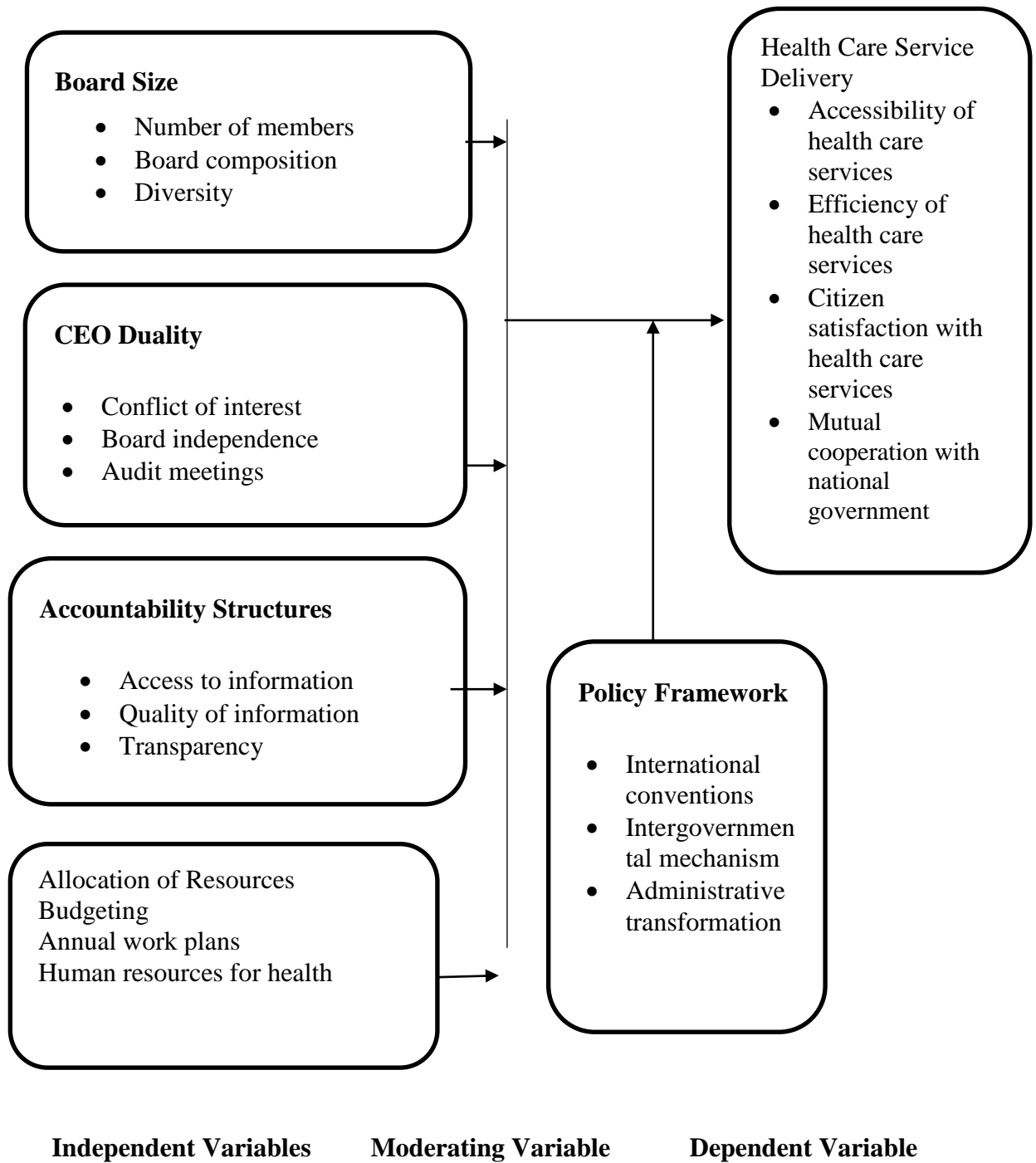
useful when considering the objective of allocation of resources in furtherance of efficient service delivery the sub-county level.

### **2.3 Conceptual Framework**

Counties deliver health care services to all citizen regardless of their social and economic status. The citizens as customers co-pay for the services rendered as envisaged in the county government act.

The link between corporate governance as independent variable and service delivery as dependent variable is explained using agency theory, resource dependency, stewardship theory and stakeholder theory. When corporate governance challenges are overcome, the counties can improve service delivery for their respective counties.

The corporate governance under consideration: Board size, CEO duality, accountability structures and allocation of resources. The moderating variable under consideration is policy framework and dependent variable is service delivery to be measured among the other indicators. The study proposes in the conceptual framework Figure 2.1 the effects of corporate governance on health care service delivery in Kenya.



**Figure 2.1: Conceptual Framework**

### **2.3.1 Board Size**

The earliest literature on board size is by (Lipton and Lorch 1992 and Jensen 1993). Dozie (2003) defined board size as the number of members that form the board. There is no agreed number of members that make up an ideal board size. However, it is a very important structural attributes of the governing Board for optional performance. Furthermore, Jensen (1993) argued that the preference for smaller board size stems from technological and organizational change, which ultimately leads to cost cutting and downsizing. Hermalin and Weisbach (2003) argued the possibility that larger boards can be less effective than small boards. Its task is to monitor, discipline and remove ineffective management teams (Beiner et al. 2003). Cheng (2008) in his article suggested that larger boards are less efficient and slower in decision-making, because it is more difficult for the firm to arrange board meetings and for the board to reach a consensus.

When Boards consist of too many members' agency problems may increase, as some directors may tag along as free riders. Lipton and Lorch (1992) recommended curtailing the number of directors to seven or eight. He opined that a larger number would be difficult for the CEO to manage and control. Further, the number of members could result in less meaningful discussion, since expressing opinions within a large group is generally time consuming and difficult and frequently results in lack of cohesiveness on the Board (Lipton & Lorch, 1992). In addition, the problem of coordination outweighs the advantages of having more directors (Jensen, 1993) and when a Board becomes too big, it often plays a more symbolic role, rather than fulfilling its intended functions of management (Hermalin & Weisback, 2003). On the other hand, very small Boards lack the advantage of having the spread of expertise and informed advice that is found in larger Boards. Furthermore, larger Boards are more likely to be associated with diversity in terms of experience, skills, gender and nationality (Dalton & Dalton 2005). Expropriation of wealth by the CEO or internal directors is relatively easier with smaller Boards since they are also associated with a smaller number of external directors. The few directors in a small

Board are preoccupied with the decision-making process, leaving less time for monitoring and evaluation activities. Given the unique operating environment in which counties operate, it is expected that County Health Management Team comprise of not more than five (5) members (MOH, 2013). The larger Board size is further aggravated by their complex organizational structure and the presence of diverse committees such as: service delivery, audit committee among others; whose composition entails presence of a Board member.

The size of the Board should be large enough to incorporate key skills and perspectives. Small enough to allow for the active participation of all the members in the meetings. The number of members on the Board vary; between 5 and 11. The total number being odd to facilitate decision making by simple majority.

Herman (1981) posit that the Board size can have positive effects as a result of a larger pool of expertise. This view is supported by Zahra and Stanton (1988) who contends that a large Board size contributes to effective performance. Yet, Mahajan and Sharman (1985) conclude that small Boards are related with a higher rate of bankruptcy. A study by Nadler (2004) posit that Boards differ in how engaged they are in influencing management decisions and their companies' directions. The study went further and stated that better corporate governance lies in the working relationships between Boards and managers in the social dynamics of Board interactions Further, Sonnenfeld (2002) expands on this thinking by identifying exemplary Boards as robust, effective social systems.

On the other hand, the role played by the Board composition as a fundamental part within the corporate governance mechanism cannot be over-emphasized. Board composition influences the effectiveness of the directors' negotiating power and mitigation for the agency problem and aligns top management efforts along shareholders' interests. Berle and Means (1932) argued that management of the firm tends to implement sub-optimal decisions arising from problems of adverse selection. Board independence is critical for the Board to effectively in monitoring the top management. Further. The outside directors have absolutely no stake in the

running of the firm. According to Fernandes (2005), the firms that has Board at its helm is composed of a higher representation of outside directors, suffers less from agency problems. Thus, the firm may enjoy an improved relationship of management and the shareholders. As a result, Board independence enhances firm performance.

The main purpose of diversity is to enhance the ability of firms to tap into diverse markets and to increase market share within a global economy (Cox, 2001). A more heterogeneous Board offers benefits from diverse members' skills and experiences which serve as complementary sources to access resources and connections (Davies et al., 2014; Ferreira, 2010). Moreover, the Board should collectively possess the necessary knowledge and experience to address the strategic and challenging demands facing the hospital management. The key desirable characteristic of a Board member is the commitment and loyalty to the ideals and vision of the institution. In addition to that, the Board is responsible to oversee the conduct of the company's business, with a view to evaluating on an on-going basis, whether the companies are being managed in a manner consistent with enhancing shareholder value and stakeholder value.

Board of Directors is the top of the decision control system of modern corporations, which mitigates agency problems due to the separation of ownership and control (Fama & Jensen, 1983). Having CEOs lead this decision control hierarchy would compromise the effectiveness of the control system and exemplifies the ultimate conflict of interest.

### **2.3.2 Chief Executive Officer (CEO) duality**

CEO duality occurs when the functional role of the CEO and that of the chairman are vested in the same individual elevating them to an entrenched position within the firm (Rechner & Dalton, 1991. Further, Cheronno, 2008; Jacobs, Mbeba, & Harrington, 2007) opines that there should be separation of the role of the Board chair and the CEO to allow the Board to make independent, responsible decisions, particularly on issues such as management performance and compensation.

The arguments against dual leadership are largely based on the agency theory. CEOs of modern corporations have decision rights but not control rights of shareholder capital. As a result, CEOs have conflicting interests and do not always act to maximize shareholder value. Board of Directors is the apex of the decision control system of modern corporations, which mitigates agency problems due to the separation of ownership and control (Fama & Jensen, 1983). Having CEOs lead this decision control hierarchy likely compromises the effectiveness of the control system and exemplifies the ultimate conflict of interest. Supporting this conflict-of-interest argument, empirical studies find that when CEO and Chair of Board are combined, CEO compensation is higher. In addition, Core, Holthausen and Larcker (1999) and Goyal and Park, (2002) opine that the turnover is lower. Proponents of separate leadership also argue that this setup allows the CEO to focus on running the business, while the Chair of Board is running the Board. An independent and experienced Chair of Board can also be a valuable resource and a sounding Board for the CEO (Dalton, Daily, Johnson & Ellstrand, 1998).

Moreover, there has been some tendency to approach the issue of CEO duality from within a perspective akin to agency Theory (Kesner & Dalton, 1986). Critics have noted that majority of large US corporation have CEOs who are also the Board chair (Kesner & Dalton, 1986). The percentage is currently about eighty per cent (Dalton & Kesner, 1987). There is some evidence that this proportion has risen over the years, and that the U.S. has an unusually high proportion of CEO duality, especially relative to the competitor nation of Japan (Kesner & Dalton 1986; Dalton & Kesner, 1987). In Australia, only a small minority of large corporations have CEO duality (Korn-Ferry, 1988). This practice has been severely criticized in the U.S. and calls have been made to create separate officeholders for the two positions (Kesner & Dalton, 1986).

According to MOH guidelines, the County Health Management Team Management Board shall comprise of; a chairperson; a representative from the department; the Chief Officer of the facility who shall be the secretary to the Board; a trained health

professional from the facility; and three other members' one of whom must be from either gender. In addition, the County Executive Committee Member is expected to appoint the members through a notice in the county.

### **2.3.3 Accountability Structures**

Gary and Maunders (1991) states that accountability involves the responsibility to undertake actions to provide an account for those actions. Indeed, accountability implies a relationship in which people are obligated to both explain and assume responsibility for their actions Sinclair (1995). Furthermore, Papenfuss and Schaefer, (2010) posit that the electorate has a right to be informed on the expenditure. Further, Papenfuss and Schaefer (2010) identified three basic ingredients of public accountability: access to information quality of information and transparency.

Additionally, Ceneviva and Farah (2012) posit that, despite the fact that access to information stands as a necessary condition for public authorities to be held responsible, this process was carried out only by way of the incorporation of norms, rules and penalty measures concerning public servants. Piotrowski and Ryzin (2007) postulates that accountability is the vital ingredient for a governance system and it hinges on transparency. The concept of transparency concur that all stakeholders enjoy a common access to all of the information they require, without gaps, interference, delay or distortion (Papenfuss & Schaefer, 2010). Grimmelikhuijsen (2012) argues that transparency incorporates multiple components, including the availability of information on both the internal tasks and performance of a public organization, which allows interested external parties to monitor its activities; the study links transparency with the degree to which the government makes information available to external actors, allowing for oversight on its activities. This understanding of transparency –a complex concept, incorporating multiple components is shared by Meijer (2013), which defines transparency as the availability of information regarding one party that allows other actors to monitor the



work and performance of the former, implying an institutional relationship of information exchange.

The Constitution of Kenya (2010) specifies that both tiers of government are entitled to equitable share of revenue raised nationally GOK (2010). There are potential negative consequences with direct involvement of the public in health care service delivery, including real or perceived manipulation of communities or of health care service delivery and their funds by inappropriately selected or trained committee members, or by politicians and other locally prominent persons. Such challenges may in turn lead to inappropriate use of scarce health system funds, and deterioration in relations between the public and health systems Goodman (2011).

Further, Chapter Twelve of the CoK, 2010 outlines the standard of how management principles of public finance should be executed. The chapter outlines the principles of public finance to include openness and accountability, public participation, the promotion of an equitable society, sharing of the burden of taxation fairly, promotion of equitable development which makes special provision for marginalized groups and areas, responsible financial management and fiscal reporting. Other principles include the requirement that the burdens and benefits of the use of resources and that public borrowing must be shared equitably between the present and future generations. Article 202 of the CoK, 2010 stipulates that revenue raised nationally must be shared equitably among the national and county governments. Parliament has enacted the Public Finance Management Act, 2012 to provide for the effective management of public finances by both level of governments. In addition, the PFM Act also stipulates the different responsibilities of government entities and other bodies in public finance management.

#### **2.3.4 Allocation of Resources**

Resource allocation decisions are crucial for the success of an organization. Indeed, resource allocation contains two aspects. The first one is the level of necessary resources; the second one is the timing of the allocation Mankins & Steele, (2005).

Resources are allocated through a decision-making process involving diverse institutions, each holding and representing discrete interests. The interactions between these institutions are crucial in determining resource allocation outcomes. Moreover, the importance of budget in health care service delivery cannot be overstated since efficient and effective use of public funds improves the capacity of county governments to utilize resources to achieve growth and development for the benefit of population. A budget is a quantitative expression of a plan of action prepared in advance of the period to which it relates. It is a plan expressed in terms of money prepared and approved prior to the budget period which show income, expenditure and capital to be employed Lucey (1993). Horngren Forster and Datan (1997) posit that a budget as a quantitative expression for period designed for future of action by management. A budget can cover both financial and non-financial aspect of these plans and act as a blue – print for the company to follow in the upcoming period. Therefore, a budget is also an itemized estimate of operating result of an institution for a future time.

According to Article 228 (6) of the Constitution of Kenya, 2010, the Controller of Budget is required to submit to each house of Parliament a report on the implementation of budgets of the national and county governments every four months. Further, Section 38 (9) of the PFM Act, 2012, requires the Controller of Budget to ensure that the public has access to information on budget implementation. However, the Office experienced delays in submission of financial reports by some MDAs, which affected timely reporting on budget implementation.

Consequently, the budget identifies the activities to be accomplished during the coming year. Izhar (1990) supports the argument of Cherrington et al (1988) that the long-term budget is a financial translation of purposed future capital investment; development of new products and abandonment of existing ones, breaking into new market and soon, this, he stated looks several years ahead. Each year is broken down into more details for the next year in an operating plan. This may intend be divided into quarterly and monthly budgets and annual budget.

Hilton, Maher and Selto (2000) explain that most people will perform better and make greater attempts to achieve a goal if they have been consulted in setting the goal. The idea of participative budgeting is to involve employees throughout an organization in the budgetary process. Such participation can give employees ownership of their budget rather than the all – too common feeling that the budget has been imposed on them. While participative can be very effective, it can also have shortcomings. Too much participation and discussion can lead to vacillations and delay. Also, when those involved in the budgetary process disagree in significant and irreconcilable ways, the process of participation can accentuate those differences.

A budget is scientific document because it is prepared under approved principles and procedures and in a systematic manner. Indeed, Appiah-Mensah (1993) contends that budgeting is the way and means of preparing budgets and that a budgets is a plan of action which has been prepared and approved prior to the period when it was used, detailing monetary, quantitative or other descriptive terms, the event to be accomplished in the budget period. A budget is different from a mere forecast, in that it is a formal management of events, which are desired, by management to take place in an organization within a defined period of time. According to Brook and Palmer (1984), it is a business's financial control system. Budgeting is about making plans for the future, implementing those plans and monitoring activities to see to it that they conform to plan. Fourie (2005) content that governance is fundamentally a political imperative and should not be confused with political-administrative role. He posits that the three critical roles of governments are redistribution to assist the marginalized, promote economic activity and allocate resources to produce collective goods for the citizens. The main challenge lies in keeping the interest of society and the ability of the environment in balance. Minnaar (2010) contends that without sustainable economic growth, the resources to develop society will not be available to the society. Consequently, due to the limited nature of revenue or income, the collective ability of satisfying the needs by delivering goods and services is also limited. Cloete (1994) posit that these restrictive factors prevent public institution from meeting the needs of the communities in full. Hence, it is essential to uphold

public accountability and the supremacy of the legislature to meet set out obligations.

Accordingly, Kimenyi, (2013) examined the current allocation of resources in Kenya and invites both the national and county government to explore possible alternatives in his paper. He however, looks at solutions mostly from an economics point of view whereas this research is going to find solutions which are ethical by going deeper into Revenue administration framework. Further, pursuant to Article 216 (1) (a) of the Constitution, the Commission on Revenue Allocation is mandated to make recommendations concerning the basis for equitable sharing of revenue raised by the national government between the national and county governments. The Commission of Revenue Allocation (CRA) has been assigned the responsibility of guiding the sharing of national revenue between national and county government. The transferring of resources to county governments has raised issues on the capability of the county governments to effectively offer quality services (Muriisa, 2008). The challenges related to employing resource allocation formulae are important to understand if policymakers wish to avoid or minimize the possible negative repercussions. The most obvious shortcoming of relying on poverty indicators or other regional data is that updated, reliable, and valid data are often difficult to find across all regions and districts.

However, data-based policy formulation can raise awareness of data gaps and motivate all involved to produce more accurate and timely data. This includes development partners, who may find that a donor recipient's augmented need for timely funding data creates new opportunities to more closely coordinate activity funding and information sharing—as exemplified by the Tanzania experience with sector-wide approach (SWAp) integration. In line with the decentralized system of governance enshrined in the 2010 Constitution, political and administrative decentralization has been underpinned by a significant level of fiscal decentralization in which power and responsibility for raising revenue and allocating resources to meet assigned functions has been granted to the County Governments.

In addition, severe shortage of health workers is a well-known problem in many low-income countries, including Kenya. The county levels are therefore responsible for human resource management, health facility construction and supply chain processes (KPMG, 2013). Indeed, the importance of enhancing health human resources capacity as a mechanism for improving service delivery is acknowledged (Cioffi et al. 2004).

### **2.3.5 Policy Framework**

In the Health sector, an explicit policy focusing on curative and preventive services was published in Sessional Paper No. 1 of 1965 on Africa socialism and its application to planning in Kenya and by 1965 provision of health care was declared free (Kimalu et al, 2004). Policy is a law, regulation, procedure, administrative action, incentive or voluntary practice of governments and other institutions. Policy decisions are frequently reflected in resource allocations. Smith, (2003) opines that policies can be classified into two: those that are currently on the public agenda and those that are not. Health sector policies and strategies in Kenya are geared towards reducing the incidence of diseases and improving the health status and quality of life of the population Health Policy Framework paper, (1994). The objectives of these policies and strategies have included the promotion of primary health care, increasing access to health care services, encouraging the private sector to play a bigger role in the delivery, and financing of health care. (Health Policy Framework, 1994)

According to (Kraft and Furlong, 2013), public policy is what public officials within government, and by extension the citizens choose to do about public problems. In Kenya, the Constitution (2010) triggered a cascade of reforms for all sectors including health. Article 43 (1) of the Constitution provides that every person has the right to the highest attainable standards of health, which includes reproductive health. Hence, Kenya is under an obligation to take legislation, policy and other measures to ensure realization of the right to health.

To meet its national and international obligation, Kenya developed Session Paper No. 2 of 2017 aimed at addressing global development effort towards the attainment of right to health. The strategic objectives of the policy include providing essential health care by making it affordable, equitable, accessible, and responsive to client needs. The health care service delivery system in Kenya is organized across six levels of care, beginning at the community level and continuing through primary care services, which include dispensaries (level 2) and health centres (level 3), and county referral health services (level 4 & 5) all the way to the national referral health care services (level 6). According to Opeskin, (1998), the term intergovernmental relation refers to relations between central, regional, and local governments which facilitates the attainment of the common goals through cooperation. Used in this sense, mechanisms for intergovernmental relations may be engaging consensual tools for the mutual benefit of the component units of the state.

According to (Van der Waldt & Du Toit, 1997) intergovernmental relations refer to a mutual relation and interaction between government institutions at horizontal and vertical levels. Likewise, (Thornhill 2002) contends that intergovernmental relations consist of all the actions and transactions of politicians and officials in national, sub-national units of the government and organs of the state. Adamolekun's (1999) posit intergovernmental relations deals with relationships between government and sub-national units. Crucial to this relation amongst circles of government are statutory bodies (legislative backing) and non-statutory bodies (constituted by government for a specific task) as these can promote intergovernmental relations in the form of committees, Boards or a range of other bodies (Kuye, Thornhill & Fourie, 2002)

Nnoli (2000) opines that the intergovernmental relations challenges require in-depth study and efficient management with regard to policy implementation. The challenges persist due to intricate divisions of labour which needs solved'. A developmental approach geared towards the continued strengthening of an effective intergovernmental relations system is likely to bring about a more integrated and coherent system.

### **2.3.6 Health Care Service Delivery**

Service delivery is the provision of health care services to the public in an efficient and effective manner. For purposes of this study services being delivered are exclusively health care services. This includes consultations, diagnosis, administering of drugs, and admission of patients among others. Parameters for measuring efficient and effective health care service delivery include delivery time and reduced operation costs. Indicators of efficiency in health care service delivery are cost effectiveness (Mills, 1997).

Despite the importance of electronic government and public sector information reuse, Owen, Cooke and Matthews (2013) put forth a criticism of the matter, arguing that undue focus has been placed on technologies employed and data structuring, creating a lack of greater emphasis on the needs of system users, and system design. The mere availability of information does not imply that the public is able to access them; the authors make a case for developing individuals' information literacy is the biggest obvious gap in government information policy Owen, Cooke and Matthews, (2013). In addressing the issue of information access legislation, Kuunifaa, (2012) posit that the same are important toward achieving transparency, but, despite this fact, concerns are raised, by way of a study carried out in Ghana, in regards to the operationalization of said laws, particularly in reference to the need for due documentation and information maintenance –allowing for later retrieval.

### **2.5 Empirical Literature Review**

This section presents theoretical review, conceptual framework, empirical studies, and critique of existing literature relevant to the study, research gaps and summary.

The literature review is based on the following study variables; Board size, CEO duality, accountability structures and allocation of resources.

### **2.5.1 Corporate Governance in Kenya**

A clear health policy focusing on curative and preventive health care services was published in Sessional Paper No. 1 of 1965 on Africa socialism and its application to planning in Kenya (Kimalu et al, 2004). Essentially, the Kenyan Government took over the running of services previously run by local councils resulting in an increase in number of rural health facilities provided by government. However, with decline of world economic performance between late 1970's to 1980's a policy shifts commonly referred to as the Structural Adjustment Programmes (SAPS) leading to the formation of the Kenya Health Policy Framework of 1994 and National Health sector strategic plan 1999-2004. A key feature of the latter was the introduction of cost sharing, which was, however not sustainable due to increasing poverty level and declining performance during the period 2000-2002. In an attempt to improve efficiency and effectiveness in the delivery of health care service in Kenya and against the limitations of a centralized health care system, the Ministry of Health (MoH) in 2012 developed her second Health Policy, 2012 – 2030 and Kenya Health Sector Strategic and Investment plan (2014-2018).

A key policy is the Kenya Health Policy. The National Health Policy 2014–2030 currently on implementation was formulated in 2014 to provide essential health care which is affordable, equitable and responsive to Kenyans. The state is mandated to put in place affirmative action programs to ensure that minorities and marginalized groups have reasonable access to health care services.

The Kenya Health Sector Support Project (KHSSP) was approved in June 2010 initiated to address poor quality health care service delivery and poor governance in the health sector. The project proposed to address these deficiencies in part by funding primary health care facilities directly through a Health Sector Services Fund, bypassing the inefficient district-level and local level bureaucracies. New social accountability mechanisms were to be introduced to promote greater community awareness of services, enhance their participation in management, accountability,



oversight and client satisfaction. Further, Kenya has set out to attain the highest possible health standards in a manner responsive to the population needs. The policy aims at achieving this goal through supporting the provision of equitable, affordable and quality health and related services at the highest attainable standards to all Kenyans. In addition, the policy framework gives direction to ensure improvement in the overall status as set out in line Constitution of Kenya 2010. Moreover, the right to health is a fundamental part of human rights as set out in Article 43(1) (a) and (2) of the Constitution. In addition, is also recognized in various international instruments and may be pursued through numerous ways such as formulation of health policies, or the implementation of health programmes as set out by World Health organization. (COK, 2020)

Under the KHSSP accountability was identified as an important mechanism for improving health governance. The KHSSP was developed to increase citizen access to health care services at the lowest level. A midterm review report done on KHSSP in September 2013 indicated that social accountability holds considerable promise for achieving better local governance and health care service delivery. Accordingly, to (Ritchie, 2014) the uptake in facilities use, reduced citizen skepticism because of information sharing, opportunities to complain and a greater sense of community responsibility for health care services.

Many Kenyans, devolution of health care services presents an opportunity to address the diversity of local needs, choices, and constraints. It carries the promise of a more equitable system of sustainable economic development for the nation including efficient health care service delivery. However, the preparedness of the new counties is a subject of much concern for Kenyans who argue that poor preparation may frustrate their dreams of improved livelihoods. This excludes those seeking health care services in these institutions (Mwabu, Mwanzia & Liambila, 1993). Further, the WHO guidelines require that a patient should not walk for more than five kilometers to access health (WHO). However, now in the fifth year since the advent of devolution system this goal remains a mirage. Indeed, a key role of

national government in health policy is ensuring that clients can access quality essential health care services without financial barriers.

From the foregoing discussion, it is evident that various attempts have been made at initiating viable development strategies geared towards propelling the country towards efficient health care service delivery. The health sector is key in addressing equity under the social pillar in vision 2030 (Republic of Kenya, 2008). However, the health care service delivery sector continues to face challenges such as inadequate funding, health infrastructure, frequent strikes by medical personnel, mismanagement of funds and personnel among others. Indeed, the lack of essential tools and poor and unsafe working environment contributes to low staff moral (Sessional paper No. 2 of 2017).

### **2.5.2 The Concept of Health Care Service Delivery**

Health care service delivery is critical to the prosperity of any nation. According to Bossert (2002) health care service delivery, reforms are inherently political and may not be sustained without a strong political will and legal framework. This shows the recognition for the importance of health care in achieving our Vision 2030 aspirations. Nancy (2010) posits that issues of equity and fairness in apportioning public health resources cannot be resolved through science and laws alone but require normative judgments. This implies that stewards of public health resources and health officials are trusted to make these judgments and to be efficient and fair in their decision-making. For instance, in Sri Lanka, the national health spending is between 3.2 and 3.5 percent of GDP, of which the public share is about 60 percent (Rannan-Eliya & de Mel, 1997). As a result, Sri Lanka has reaped benefits after devolving health and has been attributed to political will with an increased field-based intervention (World Bank, 2010). Health care disparities appear to be pervasive both between and within nations across the globe (Evans et al, 2001). At the domestic level, provisions on the right to health exist in about 115 national

constitutions, though many of them are considered as directive principle and state policy (UN,2003).

In September 2015, world leaders adopted the 2030 Agenda for Sustainable Development with the goal to end poverty, improve health, and reduce inequality by 2030. However, given the attention that is place on healthcare, the right strategies is based on equity for all.

Accordingly, theorists in international management have been focusing their attention on corporate governance as a tool to gauge the level of corporate development. Corporate governance deals with the ways in which investors of corporations assure themselves of getting a return on their investment (Shleifer & Vishny, 1997). Similarly, Aguilera and Jackson (2003) contends that despite a growing consensus that institutions matter, comparative institutional analysis of corporate governance remains in its infancy. Furthermore, investors have identified corporate governance as a key factor affecting their willingness to invest in an institutional environment (Gibson, 2003). However, only since the late 1990s have researchers begun to systematically address corporate governance problems that accompany concentrated ownership (Morck, 2000). Mills (1997) contends that there has been a widespread concern about efficiency of public health care services.

Therefore, the promulgation of the Constitution of Kenya on 27<sup>th</sup> August 2010 was a major milestone towards the improvement of health care service delivery in Kenya. The COK 2010 provides a conducive legal framework for ensuring comprehensive and rights-based approach to health. These are premised on the principles of equity and participation, which also resonates with the health care service delivery. Chapter 4 of the Constitution on the Bill of Rights are some of the sections of the Constitution with a direct bearing on public health care service delivery. The Bill of Rights introduced new ways of addressing health problems and have a direct implication on the health care sector's focus, priorities and functioning. Therefore, there is an urgent need to realign current public health care service delivery models and structures to meet these requirements. The National Development Plan of 2002-

2008 states that the health care service delivery in its current form (at the time of the National plans preparation) does not operate efficiently. Some of the areas targeted in the plan include drugs, personnel, and facility utilization. Drugs, which account for 14 percent of the health budget, were deemed to be the most promising area for improvement, particularly in drugs selection and quantification. Staffing norms for key cadres would be developed for deployment purposes. The plan also called for formulating a health manpower policy, to develop and retain human resources for health. As a result, the Ministry of Health developed Human Resources Policy guidelines to address the gaps identified. However, it is unclear whether these guidelines have been implemented by all counties to improve health care services.

Furthermore, Kenya's high expectation, which is, grounded on the fact that the new Constitution states that every citizen's right to life, right to the highest attainable standards of health. Ordinarily, the County Health Management Teams just like the National Hospital Boards are envisioned to provide innovative and quality health care service delivery. Therefore, to address the challenges that hindered health care service delivery Strategic Plan, 2008-2012, it was in the interest of the government to seek a viable management strategy that will improve corporate governance to improve health care service delivery. This was realized through the formation of a County Health Management Team Management (CHMT). The County Health Management Team (CHMT) is tasked with the responsibility of using available resources to provide health care in the counties. The main objective being to formulate policies, improve revenue generation, cost containment and efficiency of health care service delivery, increased managerial autonomy, especially in planning, budgeting, and fee collection (Meme et al, 1996).

### **2.5.3 The Concept of Policy Framework**

Policy framework is considered critical in delivering health care service. The policy framework embraces the principles of protection of the rights and fundamental freedoms of specific groups of persons, including the right to health care of children,

persons with disabilities, youth, minorities, the marginalized and older members of the society, in accordance with the Constitution. The plan gives directions to ensure a significant improvement in overall status, health care in Kenya in line with Vision 2030, the Constitution of Kenya 2010, and global commitments under the various conventions. It demonstrates the health care sector's commitment, under government stewardship, to ensuring that the Country attains the highest possible standards of health, in a manner responsive to the needs of the population. The policy focuses on ensuring equity, people-centeredness and participatory approach, efficiency, multisectoral approach and social accountability in the delivery of health care services. Further, a sessional paper No. 2 was 2017 was developed to address global initiatives and commitments on aid effectiveness, which include Rome (2003, Paris (2005, Accra 2008, & Busan 2011), that focus on aligning donor support to country policies, strategies, and priorities, and using country systems during implementation for purposes of ownership. In line with Article 2 of the Constitution, the policy will conform to these internationally ratified obligations as anticipated in the COK, 2010.

Accordingly, the health care service delivery was devolved and the County Health Management Teams to manage health care service delivery in the counties through a special issue 1795 of the Kenya Gazette Supplement No. 116 Legislative Supplement No. 51) legal Gazette Notice No. 137 of August 9, 2013 (Republic of Kenya, 2013) with varying degrees. Devolving the health function has presented institutional and resource allocation and utilization challenges that must be dealt with to assure effective and sustainable health care service delivery at the county level. Adequate attention to accountability is necessary to avoid instances of abuse of devolved resources. As a result, the Council of Governors, set up a working group of experts to spearhead devolution of more resources to all counties in Kenya through its pesa mashinani initiative.

According to Council of Governance, report (2016) there is lack of political goodwill in health care service delivery. Participants observed that the Constitution of Kenya (2010) did not specify how the counties would procure pharmaceutical products. The

report concludes that the National Government insists that all procurement of drugs should be done through the Kenya Medical Supplies Agency (KEMSA). As such, contestation on the role of the National Government on the provision of health care as a devolved function is still ongoing.

In view of the above, additional work is highly warranted in terms of understanding the effect of corporate governance on health care service delivery in Counties. Various surveys suggest that health care service delivery in Kenya is fragmented. Additional work is merited in terms of understanding if corporate governance affects health care service delivery in six (6) counties namely Nyeri, Taita Taveta, Embu, Muranga, Bomet and Kericho. All the six counties have been selected for this study.

### **2.6.1 Board Size and Health Care Service Delivery**

Khan et al. (2014) empirically investigated Board size using a sample of 1154 firm-year observations over the seven-year period 2000-2006. The studies documented a negative relation between Board size and performance followed by a positive relation. Likewise, Chiang, (2005) also found that director shareholding was statistically significant but negatively related to corporate performance. A study by (Lappalainen & Niskanen, 2012) evaluated the impact that ownership structure and Board composition have on financial performance in a sample of Finnish small to medium-sized enterprises. The study found that ownership structure affects both the growth and the profitability of small private organisations. Further the report found that organisations with high managerial ownership levels exhibit higher profitability ratios but have lower growth rates. Another study in United States by (Bart & McQueen, 2013) studied why women make better directors. Using the Defined Issues Test (DIT) instrument, 624 Board directors (75% male; 25% female) were surveyed to determine their reliance on three reasoning methods (personal interest, normative and complex moral reasoning) to make decisions. The study reported positive correlation between the presence of female directors on Boards and corporate performance suggesting that women appear to make better directors than men.

A study done by Vafeas (2003) found that longer Board tenure is detrimental to organisation value, as it leads to the decrease of Board independence governance problems. Indeed, there is a substantial literature on the importance of tenure in explaining the performance of decision makers in different professions. For example, in mutual fund managers, Chevalier and Ellison, (1999) posit that longer tenure helps them retain their job, as these managers are less likely to be terminated based on their performance, compared to younger portfolio managers. This entrenchment of longer tenured managers stems from their higher-than-average performance early in their career: in effect, they are branded as having superior skills and abilities going forward. However, their outperformance is mainly due to chance and later results in mean reversion (Porter et al., 2012).

Inversely, the larger Board is expected to be less effective as the monitoring responsibility was diffused among many directors, which suggest that the burden was less amongst them Vafeas (2000). Beasley, (1996) showed that the increases in Board size are related to the likelihood of increases in fraudulent financial statements. In addition (Bonini, Deng, J., Ferrari, M., & John, K 2015) argued that longer-tenured board members are better at monitoring management actions because they gather and store valuable information about the organisation and can share it with other independent directors. They find that such organisations are more profitable and have higher market value.

Villiers, Naiker, and Staden, (2009) argue from their study that coercing directors into retirement results in waste of talent and experience. Similarly, Zheka (2006) suggest that extended tenure enhances the willingness of directors to expend effort towards company goals. Directors with greater tenure have acquired more knowledge about a organisation and its business environment and this should improve their ability to effectively monitor (Villiers, Naiker, & Staden, 2009).

Alhassan et al. (2015) studied three corporate governance variables comprising of ten (10) listed banks on the Saudi Arabian stock market to evaluate the relationship. They were board size, board composition and board meeting with organization

performance. The study revealed that there is an insignificant positive relationship between board size and organization performance. The association between board composition and organization performance also emerges insignificant. However, the study found significant relationship between board meetings and organization performance.

However, from another perspective, diversity can be regarded as endogenous to the institutional characteristics and a way out when boards deal with agency problems. Increasing the level of heterogeneity, for instance, does not necessarily bring in more benefits because of a failure to harmonize different backgrounds and mitigate potential conflicts among board members that could ultimately lead to a negative net outcome. (Adams and Ferreira, 2009). In addition, board heterogeneity might only be regarded as an effort to comply with certain regulations, or to demonstrate an absence of discrimination and therefore its impact on organizational performance is unclear Erhardt et al., (2003). The composition of the Board reflects the unique characteristics of the organization, so it needs directors whose skills and backgrounds are diverse and complement one another. They should include lawyers, Accountants, Management Specialists, Bankers and Economists as well as networking skills.

#### **2.5.4 CEO Duality and Health Care Service Delivery**

Fallatah (2015) examined the effect of board size, board independence and CEO duality on the CEO compensation in relation to organisations performance. Data was collected for the period 2008-2012 in all listed companies on Saudi Arabian stock market. The study resolved that higher CEO compensation resulted in improved organisational performance and the CEO compensation was negatively associated with board independence. A four year study on Iranian Banking Sector concluded that relationship between Board's size and CEO duality, is not meaningful.(Abbasi et al., 2012)



A study done in Malaysia by Abdul Hamid and Azizah Abdullah (2008) on the association between fees, board and audit committee characteristics of 191 government-linked companies and non-government-linked companies. The study proposed a theoretical framework to investigate governance tools and fees, which empirically tested on a dataset of 191 Government Linked Companies and Non-Government Linked Companies listed on the Bursa Malaysia for three years from 2006 to 2008. The finding revealed that fees are positively and significantly related to board size, while not significant related to other governance variables for Government linked Companies. A study by Vafeas and Theodorou (1998) propose that CEO duality will help in reducing the costs that related to extra compensations or managerial remunerations.

#### **2.5.5 Accountability Structures and Health Care Service Delivery**

Asiimwe (2015) posited that separation of powers can lead to city administrators respecting their subordinate role and enhanced performance. The study used random sample of 492 city management employees and 28 purposively selected key informants from Kampala and Kigali. The study employed a comparative –survey-research design. Further, Wynn-Williams, (2005) conducted a study on the provision of health care services in New Zealand, found that increased performance will enhance the quality of financial reporting. The study compared the public sector and the private sector in assessing performance. Another study by Kewo (2017) concluded that financial accountability is affected by the internal control and managerial performance of local government in Indonesia. The population was 226 all local government units and a sample of 115-unit tool with respondents of 345 civil servants.

In another study, Björkman and Svensson (2009) found that information dissemination of the quality of health services in Uganda led to reduced absenteeism and better health outcomes. Similarly, Khemani, (2008) points out in her paper comparing the Indian and Ugandan cases, these different studies of community engagement with information came to two strikingly different conclusions.

According to a study done on the impact of information on the ability of communities to engage in accountability mechanisms and subsequent impacts on quality of services in India, Banerjee et al. (2010) postulated that providing information – about the education programme as well as the level of child achievement in literacy and numeracy – had little impact on engagement with the school system or demanding accountability. Rather, when community volunteers were trained to carry out remedial classes outside the classroom, it had a greater impact on children’s literacy and numeracy skills. The paper concluded that communities face serious constraints in engaging to improve the public school system even when they have information and a desire to improve education.

Community monitoring can often improve the quality of services. In an experiment in Uganda, Bjrkman and Svensson (2009) found that when local NGOs encouraged communities to engage with local health services, they were more likely to monitor providers. As a result, provider absenteeism declined and responsiveness increased in terms of shorter waiting times and greater efforts to respond to community needs.

#### **2.5.6 Allocation of Resources and Health Care Service Delivery**

In Malawi, the Civil Society Coalition for Quality in Basic Education (CSCQBE) has used PETS three times to achieve impact, improving its methodology each time (BP, (2008). PETS information was used to successfully resist the closure of teacher training colleges, get teacher salaries paid on time and ensure budget allocations for students with special needs. In 2004, the government started conducting its own tracking survey following CSCQBE’s success. Early indications of PETS in Tanzania for health and education spending carried out over two periods (1999 & 2001) suggest that corruption has reduced considerably (Gauthier, 2006).

Or (2001) studies the determinants of variations in mortality rates across 21 OECD countries between 1970 and 1995 and finds evidence of a weak statistically significant relationship between per capita health spending and health outcomes. Furthermore, some other studies have failed to identify strong and consistent

relationship between health care expenditure and health outcomes (after controlling for other factors), whilst in contrast, socio-economic factors are often found to be important determinants of health outcomes (Nolte & McKee 2004).

Another study by World Bank using a panel of data for the Indian states during 1980-99 (World

Bank, 2004) found that there was no effect of health expenditure on mortality rates. In a similar study done by Gupta, Verhoeven and Tiongson (1999) using data for 50 developing and transition countries in 1994, they find that health expenditure reduces childhood mortality rates. Similarly, to Mankins and Steele (2005), postulated that resources deployment has to be discussed as early as possible in the whole implementation planning process, and these resources financial, personal and time have to be included in the company's budget from the beginning. In addition, Gauthier (2006) opined that Public Expenditure Tracking Surveys (PETS) in Africa, they have highlighted the leakage of resources reaching facility levels.

Wagstaff and Claeson (2004) carried out a study across the globe and targeting health expenditure. The study found that there were disparities on resource allocation especially to the disadvantage of the rural and/or poor regions. For example, in Mozambique, Zambezi received seven times less government spending on health per capita than Maputo City. Likewise, in Lesotho, the poorest district received only 20 percent of the amount the capital city received in per capita allocations of public expenditures on health. Subsequently, in Peru, per capita allocations through the regional budget (which excludes teaching hospital allocations) were 66 percent higher in the Lima region than in the very poor regions. Bangladesh too, had more developed districts receiving more per capita than less developed districts.

### **2.5.7 Corporate Governance Policy framework and Health Care Service Delivery**

Sundet, (2004) posit that policy change is really more a function of how much public discussion the survey generates and how widely the report is shared than anything else. The study repeats the same finding in 2007 by arguing that the Tanzania

experience shows that Public Expenditure Tracking System is not a silver bullet and vested interests can easily derail the process (Sundet, 2007). Similarly, Reinikka, Ritva and Svensson (2006) studied three different data collection approaches and their impact on measuring and explaining corruption, and they too concluded that it is not much supervision, but the recipients' ability to voice their claims for funds that explains. According to Kraft and Furlong, (2013), public policy is what public officials within government, and by extension the citizens they represent, choose to do or not to do about public problems. Likewise, Paudel, (2009), O'Toole et al. (2003), and Kraft and Furlong, (2013) attributed policy implementation difficulties to governance shortcomings. Conversely, Walters, L. C., Aydelotte, J., & Miller, J. (2000) believed that policy analysis undermines democratic institutions, thereby affecting corporate governance.

#### **2.5.8 Corporate Governance and Health Care Service Delivery**

According to a study done by Dufils, (2010) in Madagascar on assessing services using the Local Governance they find that there were very low levels of perception of accountability by citizens. The resultant action plan had several positive impacts: effective channels of partnership and communication were developed and complaint processes and recruitment procedures for municipal staff were improved, with more women being hired at senior levels.

Indeed, the failure of democratic institutions to deliver for the poor also resulted in calls for deepening democracy through the direct participation of citizens in governance (Fox, 2007). Accordingly, innovative institutions such as governance councils in Brazil or village assemblies in India were viewed as embodying this spirit (Cornwall, Schattan, V Coelho, 2006; Manor, 2004).

In a report evaluating 100 case studies that mapped the outcomes of citizen engagement, Gaventa and Barrett, (2010) postulated that over 30 cases in which significant impacts were made on service delivery, including in the health and education sectors. Jojo (2017) carried out a study in Ghana to empirically examine the

need for governance institutions in Ghana to focus on policy results that impact directly on citizen's wellbeing rather than results that are achieved immediately after implementing program of activities. The study found that showed a significant negative relationship between the regulatory quality governance indicator and policy gaps.

## **2.5 Critique of Existing Literature Related to the Study**

This section discusses the empirical literature. Several empirical studies are reviewed with a view to building a case for the current study. These studies related to the effect of corporate governance and its dimensions on health care service delivery. Several studies in this area were compared on the basis of scope, methodology, objectives, variables, conclusions and research gaps. A study done in India found that successful experiments in making service delivery effective without collective action playing a role, and without necessarily enhancing social accountability (Chand, 2006). The study found that a variety of factors – political and institutional – have contributed to these successes in the longer term.

Shleifer and Vishny (1997 and Gugler (1999) conducted a survey and found that control is valued, which would not be the case if controlling block holders or large shareholders received the same benefits as other investors. The study looked at only one aspect of large shareholders. Another study by OECD council ministerial in 1999 sought to study the causes of growth disparities and identify the factors and policies which could strengthen long-term growth performance. The study found that while macroeconomic factors certainly play a major part in the economic performances of OECD countries, governments have increasingly come to recognize that there are strong complementarities between sound macroeconomic policies and sound microeconomic foundations. However, the study only sought to identify one aspect the factors and policies which could strengthen long-term growth performance.

Indeed, Board diversity is expected to enrich decision-making process leading to better performance. On the other hand, diversity could become a burden to integrate and coordinate different views leading to poorer performance. Board independence is often linked to organisation performance in the existing literature, based on the assumption that boards have power to influence organisations' decisions and strategies, thereby affecting organisation performance (Hillman et al. 2001). Two competing theories dominant in the literature offer different perspectives. Agency Theory suggests that a board of trustees should have a large proportion of nonexecutives because managers are individuals who maximize their own private utilities (Fama & Jensen 1983; Jensen & Meckling 1976). Consequently, an outsider-dominant independent board can reduce agency cost and effectively monitor managerial opportunistic behavior (e.g. shirking and excess perquisites) to ensure executives pursue shareholders' interests, which in turn, improves organisation performance.

Similarly, Agency Theory is said to have a narrow focus reliant on the examination of shareholder returns and management control Allen and Gale (2000), and presents only a partial view of the world (Eisenhardt 1989). Stiles and Taylor, (2002) claimed that agency and economic theory has dominated empirical studies on corporate governance, with the emphasis of research on the link between Board composition and financial performance. Ryan (1994) advocated that Agency Theory's economic focus is limited and devoid of a sociological perspective, particularly in relation to studies in healthcare.

All in all, the Stewardship Theory suggests that a board of trustees should consist of a large proportion of inside members because managers are basically trustworthy and, left on their own, are good stewards of corporations by acting in the best interest of their shareholders. An insider-dominant board facilitates better information exchanges and has the knowledge and expertise to make appropriate business decisions, which in turn, improve organisation performance. Empirical studies have found support for both theories, leading to the conclusion that the relationship

between board independence and organisation performance is mixed and difficult one to make.

Stoeberl and Sherony (1985) and Anderson and Anthony (1986) argue that CEO duality provides clear-cut leadership in strategy formulation and implementation and will therefore lead to better organisation performance. Splitting titles may create information sharing costs, conflicts between CEO and non-CEO chairman and inefficiency: It might be costly to communicate organisation-specific information to others in a timely manner; decision making process and execution may both be less efficient when there are two versus one key leader; it may be more difficult to assign blame for bad company performance.

## **2.6 Research Gaps**

The above reviewed literature presents studies carried out in different parts of the globe, on matters pertaining the effect of corporate governance on health care service delivery. There is a relatively small body of work to systematically examine the effect on governance on health service delivery in Kenya. A study done by Alexander, Weiner, Bogue (2001) found that board structure, board composition, and director selection criteria changed very little over the previous decade. Prior studies examine the value relevance of board tenure indirectly, through the lens of two main board functions – monitoring and advising. Some studies in this area look at the link between the length of board tenure and the Board's ability to monitor management (Vafeas 2003, Berberich et al. 2011), Beasley 1996), Rutherford et al. 2007), Sharma 2011). The assumption underlying this approach is that if tenure improves the way the board functions, this will also enhance organisation value.

A study by Honduras and Argentina by Jason & Derick, (2011) on health management committees revealed that Hospital Management Committee formed at the local level was effective. However, the committee formed were too large to be effective. Moreover, as the committee was constituted by office order, there was ample opportunity to utilize the services of human resources in health, infrastructure,

and medicine and health equipment locally for the welfare of the local people. There was neither any representation of union and local community level nor of the local government representative from the UP level. For that reason, the problems of grassroots level were not likely to be properly addressed. Another study done in South Africa on the influence of board structure recommended that a balance between executive and non-executive directors preferably with a majority of Non-Executive Directors of whom a majority number should be independent (King report, 2009).

A study done by Lewis and Paterson's, (2009) on the health care service delivery framework and governance analyzed failings in service delivery from a patient's perspective but did not clearly identify the individual impacts and several other reasons behind the failings. Further, according to Lewis and Paterson (2009), the sound provider performance in turn, raises the level of health outputs and can contribute to improved outcomes.

Tsamenyi et al (2007) observes that corporate governance studies in developing countries are limited and available only on an individual county basis. Fawzy (2004) and Euromoney (2000) have argued that developing countries differ widely among themselves, hence the need to study corporate governance of each county separately (Dahwy, 2009). Further, in contrast to an Agency Theory perspective, Finkelstein and D'Aveni (1994) show that in general cases, vigilant boards prefer duality.

Another study done in Ghana on Asante Akim South District Assembly by Jonas Ayaribilla Akudugu (2012) focused on basic financial roles or responsibilities of actors involved in local government financial administration. The study found that not all the core staff of the Asante Akim South District Assembly knows all the specific financial roles or responsibilities of their colleagues in the financial management. The study also found that, the Assembly members who are supposed to hold the officials of the Assembly accountable; do not have a fair understanding of the roles and responsibilities of the core staff in the financial management chain. The paper concluded that until efforts are made to address the interest of people, the



quest for transparency and accountability in local government financial administration would remain a mirage.

For Kenya, Waithaka (2013) found that of the Micro Finance Institution board members fall between five and nine board members. Opiyo (2014) measured service delivery with service accessibility and disregarded other dimensions such as corporate governance and accountability mechanism. Macharia et al. (2014) study concentrated on Kipipiri Constituency, Nyandarua county to examine the influence of citizen participation on decentralized service delivery while the focus on the current study is in six counties in Kenya.

The above studies have been carried out in other countries, but only a few studies have been carried out in Kenya, which are addressing corporate governance, but none has addressed the effect of corporate governance on health care service delivery in Kenya. The few studies of research in Kenya in this area raise a question as to whether corporate governance affect health service delivery. This study filled the missing knowledge gap on the effect of corporate governance on health care service delivery in Kenya. Although there exist several studies on corporate governance in less developed and emerging economies (Shleifer Vishny 1997) in the context of Kenya there are very few studies attempt to link corporate governance and health care service delivery, a systematic review of the literature shows a number of gaps in the studies linking corporate governance to health care service delivery. Consequently, these gaps are what makes this study vital. It was therefore vital to carry out the research to assess the effect of corporate governance on health service delivery in Kenya. This study sought to find out whether the above gaps were manifested in Nyeri, Taita Taveta and Kericho, Bomet, Embu and Muranga. Despite much progress, in the last five years, it is noted that many counties continue to rank poorly in terms of service delivery. This study therefore sought to bridge this gap by determining the effects of corporate governance on health care service delivery in Kenya.

## **2.7 Summary**

The empirical literature shows that board size, Chief Executive Officer duality, accountability structures and allocation of resources have the potential to influence corporate governance at the health care service level in the Counties. However, the research gaps exist and these includes insufficient literature on the relationship among the independent variables on policy framework. For example, what is the relationship between board size and Chief Executive Officer duality in improving health care service delivery in the counties? On the contrary other schools of thought argued that increase in number of directors can provide more opportunities for networking, diversified opinions and more skilled managers which results in superior performance. (Kiel and Nicholson, (2003), Adam and Mehran (2005) and Dalton and Dalton (2005), furthermore, larger boards are more likely to be associated with an increase in board diversity in terms of experience, skills, gender and nationality. The counterargument of positive association between board size and performance was also empirically tested by Mak and Li (2001) and Adams and Mehran (2005) and Belkhir (2009), which showed evidence in support of large board size with higher performance. Further, the study by Adam and Mehran (2005) which composed of Tobin's Q type measure of organisation's performance showed evidence in favor of large board size linked with higher performance. Consequently, given the dynamics of sub national government there is need to assess the extent of these effects and examine the raised questions in relation with corporate governance at the county level. Given the fact the scope of the study is limited by time and other resources, the proposed research on the effects of corporate governance on health care service delivery was undertaken in six counties in Kenya and highlight some information related to the identified gaps.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides information on the research philosophy and design, population, sample size, sampling scheme that were used in this study. It also explains data collection procedures and concludes with analysis.

#### **3.2 Research Design**

A Research design is a roadmap of how one goes about answering the research questions (Bryman & Cramer 1997). The study design was good because it allows collection of information for dependent and independent variables using interview and questionnaires (Orodho, 2003). Both quantitative and qualitative approaches were used in the study. Research design is thus a plan of how the research will be carried out (Waithaka, 2013)

Sekaran, (2010) states that a good research design has a clearly defined purpose and has consistency between the research questions and the proposed research method. It is the framework to solve a specific problem. It gives direction and systematizes the research. It refers to the process that the investigator will follow from the inception to completion of the study (Cooper & Schindler, 2014); Mugenda, 2012); (Mugenda & Mugenda, 2003). On the other hand, Mugenda & Mugenda (2003) define a survey as simply the framework or blueprint for the research. The strategy of inquiry provides a specific direction on how research is conducted (Frankfort-Nachmias & Nachmias, 2008).

Several different research designs can be applied to answer research problems. They include experimental which follow scientific designs to examine changes by manipulating other variables where subjects are randomized to establish cause and effects, non-experimental which include exploratory, analytical and descriptive which

describes a population or phenomena evaluated over a period of time through sampling subjects, describing rather than comparing results of surveys and providing the norms of population. Descriptive research designs are further classified as quantitative which explains differences and determines causal relationships and qualitative which distinguishes processes and meanings and describes a phenomenon. The study adopted descriptive research design, which in essence describes data and characteristics about the population or phenomena being studied. In addition, descriptive research is often used as a pre-cursor to more quantitative research designs with the general overview giving some valuable pointers as to what variables are worth testing quantitatively (Adams et al. 2007). Similarly, Ghiasy and Hosseini (2010) applied descriptive design in their study titled challenges in developing entrepreneurship in Iran's Coffee co-operatives. Recently, Wepukulu. (2016) applied descriptive design in his study titled the relationship between corporate governance and performance of commercial banks in Kenya for the period spanning 2001-2013 and contends that there is a negative and significant relationship between board size, institutional ownership and block ownership with bank performance in terms of return on equity.

### **3.2.1 Research Philosophy**

The study adopted a positivism research Philosophy. Mwaniki (2015) argued that positivist approach research is based on knowledge gained from positive verification of observable experiences rather than intuition. Crabtree (2015) holds the belief that the positivist approach are general patterns of cause and effect that can be used as a basis for predicting natural phenomena and the goal is to discover his phenomenon.

### **3.3 Target Population**

A population is an entire group of individuals events or objects having common characteristics that confirm to a given specification (Mugenda & Mugenda, 2012). Kombo and Tromp (2014) stated that population is a group of individuals, objects or items from which samples are taken for measurement. Target population is defined as

those units for which the findings of the survey are meant to generalize (Kariuki, Namusonge & Orwa, 2015).

### **3.4 Sample Size and Sampling Techniques**

A two-stage sampling technique was used to select 347 health workers from a population of 3577. In the first stage, six counties were randomly selected from the 47 counties in the country. The counties are Bomet, Kericho, Nyeri, Muranga, Taita Taveta and Embu. In the second stage, a stratified random sampling technique to select 347 respondents from the six counties. The health workers were drawn using equal allocation from six strata based on the Departments in the counties.

- i) Senior County Health administrators
- ii) Clinical officers
- iii) Nurses
- iv) Doctors

The unit of analysis was senior county administrators, clinical officers, nurses and doctors from Level 5 hospitals – because these officers are most knowledgeable about health care service delivery. In addition, these are senior officers in the Governments and therefore have vast management experience. They are expected to provide good insights in this study since they provide leadership to those below them.

The sample consisted health officers who are charged with the delivery of health care in the counties.

**Table 3.1 Study sample size drawn from six counties.**

County	Population (N)	Ni/N	Senior county health administrators	Clinical officers	Nurses	Doctors
Nyeri	1252	121	62	34	23	3
Taita	325	32	15	26	14	4
Taveta						
Embu	400	39	10	20	6	3
Muranga	638	62	12	36	10	4
Bomet	612	59	10	18	5	1
Kericho	350	34	15	15	7	2
	3577	347	116	152	63	16

The population of the study (3577) was less than 10,000, the final sample size estimate could be adjusted as recommended by Mugenda (2003).

$$fn = \frac{n}{1 + n/N}$$

Mugenda and Mugenda (2003) define sample population as a representative population selected from the accessible population to act as a representative. They argue that for a researcher to select the sample size, the size should be as representative and be generalized to the whole population. Therefore, the sample size for the study was calculated using Mugenda and Mugenda (2003) formula for sample size determination for population less than 10,000;

$$nf = \frac{n}{1 + (n - 1)/n}$$

Nf- the desired sample size (where the population if less than 10,000)

n- The desired sample size

N – the estimate of the population size

$$nf = \frac{384}{1 + (384 - 1)/3577}$$

Since our target population of the study was less than 10,000 i.e  $N=3577 < 10,000$  an adjustment was made using Mugenda (2003) expression which is

$$Nf = (n/1+n/N)$$

Where:

- i)  $n$  = is the sample size based on population size which above 10,000. In this case it was 384
- ii)  $nf$ = is the desired sample to be computed
- iii)  $N$ = Target population i.e 3577

Based on the above expression, sample size was given as follows

$$Nf=(n/1+n/N) = 384/1+384/3577=347$$

Where  $N_i$  represent target population in each county selected and  $N$  is the target population size (3577). The above computed sample size was distributed as follows.

**Table 3.2: The Sample Distribution per County**

Counties	Target Population (N)	Sampling per cent	Sample size (n)
Nyeri	1252	40.5	121
Taita Taveta	325	3.0	32
Kericho	350	3.3	32
Embu	400	12.9	39
Bomet	612	19.8	60
Muranga	638	20.6	62
	3577	100%	347

According to Avis and Haber (2002) sampling is a process of selecting representative units of a population for a study in a research investigation, whereas a sample is apportioning of the population that represents the entire population. By using sample, researchers save lot of time and money, get more detailed information, and they are able to get information which may not be available otherwise (Bluman, 2009).

On the other hand, (Babbie & Mouton 2001) argue that judgmental sample is the type of non-probability sample in which one select the units to be observed on the basis on one's own judgment about which ones was the most useful or representative. The use of the survey can help to describe the nature of the population better and also aids in achieving reliable answers to the same set of questions by all respondents (Janes 2001). Given the vulnerability of the data provided, and the need to ensure confidentiality and anonymity of the respondents, the use of survey approach sufficed as the most appropriate and suitable technique for this study. In addition, survey method is good due to its versatility, efficiency and its ability to make generalization (Mugenda & Mugenda, 2003 & Blumberg, 2008). Further, survey research provides a quantitative description of trends, attitudes, and opinions of a population through the study of samples that represent a population (Frankfort-Nachmias & Nachmias, 2008). Survey design helps in generalizing the results achieved from a sample of a particular population by attributing the results obtained from the sample to the actual population (Babbie, 1990).

The other advantage for using a survey is its ability to measure various determinants variables without substantially increasing the limiting factors of time and cost. Surveys are useful because they can enable the researcher to get a lot of data that is accurate and cost effective in a relatively short time. The anonymity of surveys allows respondents to provide responses that are more candid and valid especially if it is clearly stated that the responses will remain completely confidential. Given the sensitivity of the data provided, and the need to ensure confidentiality and anonymity



of the respondents, the use of survey approach sufficed as the most appropriate and suitable technique for this study to conduct a quantitative analysis of four independent variables, which are board size, CEO duality, allocation of resources and accountability structures. The dependent and moderating variable was health care service delivery and policy framework respectively. The study adopted both descriptive and correlation design to aid in answering the research questions. It helped to obtain information concerning the status of the phenomena, described what relationships exists that assisted in measuring the effect of corporate governance on health care service delivery in Kenya. These approaches were also used successfully in a study of 'India's corporate sector' (Patibandla, 2006).

### **3.5 Research Instruments**

Research instruments are testing devices used for measuring a given phenomenon designed to obtain data on a topic of interest from research subject (Maina, 2012). Structured questionnaires were used as a primary data collection instrument in collecting general data on corporate governance. Alongside the questionnaire, secondary data that was collected from CIPD annual reports of individual counties, county website and Council of Governors websites. Questionnaire was used to collect primary data (through open-ended section of questionnaire).

The use of questionnaire is cost effective, less time consuming as compared to the interviews. Data was collected through the use of well-structured questionnaire. To be successful, the questionnaires was short and simple Kothari et al (2004). In addition, structured questionnaires have some control or guidance given for answers. They were basically short and of closed form requiring the respondent to tick an appropriate response based on Likert continuum scale of the range of 1 to 5; where 1 was strongly agree, 2 agree, 3 neither agree nor disagree, 4 disagree and 5 strongly disagree. The questionnaire was the same for all categories of officials in the county executive. The respondents in the county executive were senior county administrators, clinical officers, nurses and doctors.

### **3.7 Data Collection Procedures**

The researcher first obtained an approval from Jomo Kenyatta University of Agriculture and Technology to proceed to the field to collect data. Thereafter consent to conduct the research from the National Council for Science and Technology (NACOSTI) was obtained. Both primary and secondary data was collected in this study. A questionnaire is a data collection tool, designed by the researcher and whose main purpose is to communicate to the respondents what is intended and to elicit desired responses in terms of empirical data from the respondents in order to achieve research objectives (Mugenda & Mugenda, 2008). A structured questionnaire was administered to the respondents was asked to indicate, against each statement, the extent to which they agreed or disagreed on a five-point Likert type scale ranging from 1 (strongly agree) to 5 (strongly disagree). Each statement was coded using Statistical Package of Social Sciences (SPSS). The variables included: board size, CEO duality, accountability structures and allocation of resources. The questionnaire was segmented into five sections in line with the research objectives.

#### **Questionnaire**

A questionnaire was used to collect data. Health care service delivery data is also found on secondary sources such as publications. This helped to determine and capture historical data. The questionnaire was developed by the researcher.

### **3.8 Reliability of Research Instrument**

To test for reliability, the study used Cronbach alpha Coefficient test for testing the research tools (Santos, 1999). Cronbach alpha Coefficient has a value between -1 and 1. The coefficient is high when its absolute value is greater than or equal to 0.7 (Mugenda & Mugenda, 1999). The higher the score, the more reliable the generated scale is (Delafrooz, Paim & Khatibi, 2009). According to (Nunnaly 1978),

Cronbach's alpha score of 0.7 is acceptable reliability coefficient (Gliem & Gliem, 2003).

The Statistical package for Social Science (SPSS) version 20 was used to analyze the data. Brown (1988) indicates that Cronbach alpha reliability coefficient normally ranges between 0 (if no variance is consistent) and 1 (if all variable is consistent). The closer the Cronbach alpha coefficient is to 1, the higher the internal (consistency) reliability of the items in the scale (Sekaran, 2003). Reliability depends on how much of the variation in scores is attributed to random errors arising from inaccurate instructions to subjects, interviewer and interviewee fatigue (Zikmund, Babin, Carr and Griffin, 2010). The four independent variables, the intervening variable and the dependent variable was subjected to reliability test using SPSS. To compute the coefficient, the researcher used the formula below:

$$Re = \frac{2r}{r + 1}$$

Where

Re = reliability of the original test

r = reliability of the coefficient resulting from correlating the scores of the odd items with the scores of the even items.

### **3.8 Pilot Test**

Dawson (2009) elucidated that pilot testing assisted researchers to see if the questionnaires obtained the required results. In addition, Muchina, Namusonge and Sakwa, (2015) explained that the purpose of pilot test is to refine the questionnaire so that respondents do not face challenges in answering questions.

A pilot test to test the validity and reliability of the questionnaire in gathering the data required for this study. One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated. In the words of De Vaus, (1993) do not take the risk. Pilot test first. Polit, (2003), informs the purpose of a pilot test is not so much to test research hypothesis, but rather to test protocols, data collection instruments, sample recruitments strategies and other aspects of a study in preparation for a larger study. Kombo and Tromp, (2009) describe a pilot test as a replica and rehearsal of the main survey. The purpose is to ensure that those items in the questionnaire are clearly stated and have the same meaning for all respondents. Frankland and Bloor, (1999) argue that piloting provides the qualitative researcher with a clear definition of the focus of the study which in turn helps the researcher to concentrate data collection on a narrow spectrum of projected analytical topics. The research instrument was pretested using a sample of 1.5% as per Mugenda and Mugenda, (1999) that a successful pilot study would use 1% to 10% of the actual sample size. The study was undertaken in Machakos which is not among the targeted county. A total of ten (10) respondents was targeted. The respondents were used for pretesting was similar to the sample under study using procedures similar to those of the actual study. A pilot study was carried out in Machakos County which comprised of 10 questionnaires. It therefore gave the results of descriptive statistics and reliability tests. The county findings were not included in the final study.

### **3.9.1 Validity of Research Instruments**

Validity is the degree by which the sample of the test items represents the content the test is designed to measure (Kothari, 2004). It is the extent to which research instrument measure what they are intended to measure (Oso & Onen, 2011). There were several statistical tests and measures that were used to assess the validity of quantitative instruments, which generally involved pilot testing and reliability test. The content validity formula was used in line with other previous studies (Waithaka,

2013). External validity was used in measuring the extent to which the results of a study was generalized from a sample to a population of items under study. Donald & Pamela (2001) posit that content validity is determined by expert judgement. In this study, validity was done through expert judgement. Further, content validity was used in ascertaining the appropriateness of the contents in the research instrument that is: whether the measures (questions, observation) accurately assessed what the researchers wanted to know. Therefore, the study questionnaire was scrutinized for external validity and content validity. Factor analysis is a statistical method used in describing the variability among observed, correlated variables in terms of a potentially lower number of unobserved constructs called factors. Factor analysis was employed to test the suitability of the questionnaire especially where a variable is found to have many potentially observed constructs. Factor analysis searches for such joint variations in response to unobserved latent variables.

### **3.9.3 Sample Size and adequacy test**

Prior to the extraction of the factors, several tests are used to assess the suitability of the respondent data for factor analysis. They include Kaiser-Meyer-Olkin (KMO), Measure of Sampling Adequacy (MSA) and Bartlett's Test of Sphericity (BTS). The KMO index ranges from 0 to 1, where 0.50 is considered suitable for factor analysis. The Bartlett's Test of Sphericity be significant at ( $p < .05$ ) for factor analysis (Williams, Brown, & Onsman, 2010). The study tested the sample adequacy of each objective under the Kaiser- Meyer- Olkin Measure of Sample adequacy as shown in Table 3.2. Kaiser- Meyer- Olkin Measure of sampling adequacy are categorised in the 0.90 as marvellous, 0.80's as meritorious, 0.70's as middling, 0.60's as mediocre, 0.50's as miserable and below 0.50 as unacceptable.

### **3.9.4 Factor Loadings**

Factor analysis is commonly used and considered as the method of choice for interpreting self-reporting questionnaires. It is a multivariate statistical procedure that reduces a large number of variables into a smaller set of variables (also referred to as factors), establishes underlying dimensions between measured variables and

latent constructs, thereby allowing the formation and refinement. It provides construct validity evidence and addresses multicollinearity (two or more variables that are correlated). The ways used to extract factors include; Principal Components Analysis (PCA), Principal Axis Factoring (PAF), Image Factoring (IF), Maximum Likelihood (ML), Alpha Factoring (AF) and Canonical (C). Principal component analysis is a standard dimension reduction tool for multivariate data. The method reduces the number of variables in a dataset so as to remain with a subset that contains much information to eliminate redundancy. This study therefore adopted the Principal Component analysis.

### **3.9.5 Data Analysis and Presentation**

After collection, data was analyzed using: descriptive and inferential statistics. Descriptive statistics enable the researcher to meaningfully describe a distribution of measures and summarize data (Kothari, 2009; Mugenda & Mugenda, 2003). The study conducted descriptive statistics to show, summarize, organize and simplify data in a meaningful way. The number of cases in the data set was recorded under the columns and the average was contained in the Mean column. Variability can be assessed by examining the values in the Standard Deviation column appendix IV. If skewness = 0, the data are perfectly symmetrical, less than  $-1$  or greater than  $+1$ , the distribution is highly skewed, between  $-1$  and  $-0.5$  or between  $+0.5$  and  $+1$ , the distribution is moderately skewed, between  $-0.5$  and  $+0.5$ , the distribution is approximately symmetric. Bulmer, (2011) indicated that if all the variables reached the normality threshold the skewness is between  $-1$  and  $+1$  and can therefore be acceptable and fit for analysis.

Under inferential statistics partial correlation analysis and hierarchical multiple regression analysis under the panel data framework was used in testing the hypotheses. The use of inferential statistic enabled the researcher make inferences or judgment about a population under study.

Panel data analysis is a method of studying a particular subject within multiple sites, periodically observed over a defined time frame. Westham, (2009), contends that

panel data relates to repeated observations on the same cross section, typically of individual variables observed for several time periods. Partial correlation analysis was used in identifying the nature of the relationship between the dependent, moderating, and independent variables. The correlation coefficients were used in measuring the effects of corporate governance on health care service delivery on variables: values of  $\pm .1$  represents a small effect,  $\pm .3$  is a medium effect and  $\pm .5$  is a large effect (Field, 2009). A correlation simply indicates that there is a weak, moderate, or strong relationship (either positive or negative), or no relationship, between two variables (Sherry, 2005). While one needs to report on statistical significance, one should focus on the strength of the relationship and the amount of shared variance.

Hierarchical multiple regression analysis was used in determining the relationship between corporate governance variable and policy framework. The research also observed t- statistic and significant P-value.

### **3.9.6 Model Specification and Variable Definition**

The study was interested in predicting the value of dependent variable, moderating variable based on the value of independent variable. To draw conclusion on the objective involving the moderation effect on service delivery, a Moderated Multiple Regression (MMR) was fitted. The Moderated Multiple Regression has been recognized as an appropriate technique to assess the presence of moderator variable. Hence, the researcher used moderated multiple regression model because there is more than one independent variable (Lind et al. 2008). Importantly however, regression does not assume causation (Gujarati & Porter, 2008). The researcher employed a Moderated Multiple Regression (MMR) Model of analysis under the panel data framework that is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \dots\dots\dots(1)$$

Where

Y = Health Care Service delivery

$\beta_0$  = Constant (Co-efficient of intercept)

X<sub>1</sub> = Board size;

X<sub>2</sub> = Board independence;

X<sub>3</sub> = Accountability structures;

X<sub>4</sub> = Allocation of resources

e = Error term

$\beta_0$  is the Y – intercept (Constant) and

$\beta_1, \beta_2, \beta_3, \beta_4$  = Regression model parameters

Prior studies Wagenberg and Gutierrez (2016) found the importance of creation of a demand for sustained action. Further, Bino and Tomar, (2007) had used these variables in examining the relationship between corporate governance and policy framework.

The moderating variable is measured by International conventions, Intergovernmental mechanism and administrative transformation.

### **3.9.9 Tests of Multicollinearity**

Multicollinearity occurs in the data when two or more independent variables are highly correlated. According to (Hair, Anderson, Tatham, & Black, 1995) a value of 10 has been recommended as the maximum level of VIF (Hair, et al 1995). The VIF recommendation of 10 corresponds to the tolerance recommendation of .10 (i.e.,  $1 / .10 = 10$ ). However, a recommended maximum VIF value of 5 (e.g., Rogerson, 2001) and even 4 (Pan & Jackson, 2008). The researcher accepted a maximum VIF of 5. In addition, the researcher used the method below to detect the presence of multicollinearity: tolerance test and Variance Inflation Factor (V.I.F.).



$$\begin{aligned} & \text{V.I.F. } (X_i) & \text{V.I.F } (X_1) \\ & = \frac{1}{(1 - R_i^2)} \end{aligned}$$

Where  $R_i^2$  coefficient of determination obtained when  $X_i$  ( $i=1, 2, 3,4$ ) is regressed on all remaining independent variables in the model.

Normality is taken seriously, for if it does not hold, it is impossible to draw accurate and reliable conclusions about reality. The main tests for the assessment of normality are Kolmogorov-Smirnov (K-S) test, Lilliefors corrected K-S test, Shapiro-Wilk test, Anderson Darling test, Cramer-von Mises test, D'Agostino skewness test, Anscombe-Glynn kurtosis test, D'Agostino-Pearson omnibus test and the Jarque-Bera test. Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests can be conducted in the SPSS by an Explore Procedure (Analyse → Descriptive Statistics → Explore → Plots → Normality plots with tests), however, limitation of the K-S test is its high sensitivity to extreme values and low power but the Lilliefors correction renders this test less conservative. Shapiro-Wilk test is based on the correlation between the data and the corresponding normal scores and provides better power than the K-S test even after the Lilliefors correction (Ghaseni & Zahediasol, 2012).

### **3.9.10 Tests of Autocorrelation**

Autocorrelation problem occurs when error term observations in a regression are correlated making the coefficient estimates unbiased, variance of coefficient estimates to increase hence suppressing the estimated standard errors given by ordinary least square. Durbin-Watson statistic test was used in testing first-order correlation in the study. Durbin-Watson statistic should be in the range of 1.5 and 2.5 an indication that there is no concern of autocorrelation (Velnampy, 2011).

### **3.9.11 Test of Heteroscedasticity**

Heteroscedasticity problem arises in the data when the variance of the residuals is not constant across all observations. This may be because of sub-population differences; the model being not correctly specified or if there are any other intervention effects in the data or an omission of especially important variables from the model. This error would be present if a p-value is less than a significance level of 0.05, therefore we can reject the null hypothesis which states that corporate governance, board size, CEO duality, allocation of resources, and accountability mechanisms have no relationship on health care service delivery in Kenya. In addition, the study also tested the null hypothesis that there is no moderating effect of policy framework on the relationship between board size, CEO duality, allocation of resources and accountability mechanism and health care service delivery in Kenya. This problem was checked by plotting error term observations or residuals against a Z factor. Heteroscedasticity becomes a problem when the error term observations swing further from zero as one move to the right-fan shaped patterns (Stewart, 2018).

### **3.6 Summary of Measures of Study Variables**

This study involved measurement of four independent variables namely Board Size, CEO duality, Accountability structures and Allocation of resources; moderating variable, policy framework and response variable, health care service delivery. The study used 5-point Likert scale. According to Kothari (2004), Likert scales are good because they show the strength of the person's feelings to whatever is in the questions, they are easy to analyze, they are easy to collect data, they are more expansive and they are quick. The researcher used Likert continuum scale of the range of 1 to 5; where 1 was strongly agree, 2 agree, 3 neither agree nor disagree, 4 disagree and 5 strongly disagree. Notably, similar related governance studies have used questionnaires with Likert scale with satisfactory results (Abe & Monisola, 2014; Alaaraj & Ibrahim, 2014; Macharia et al., 2014; Opiyo, 2014; Wangari, 2014).

## CHAPTER FOUR

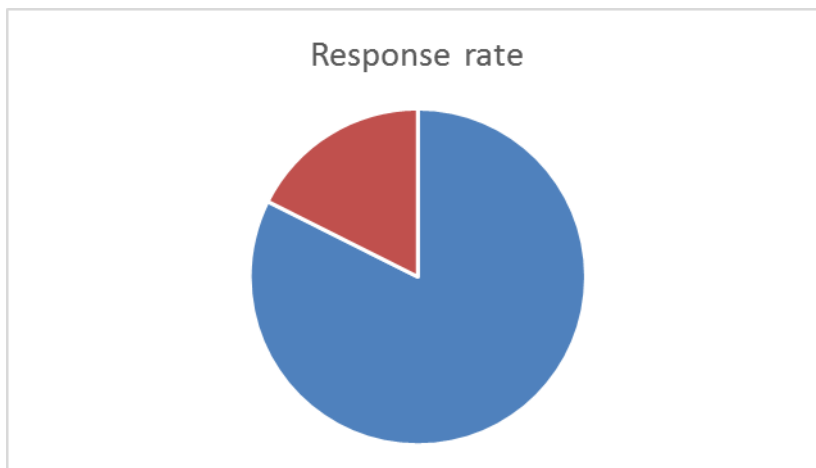
### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

The chapter presents the empirical findings and results of the application of the variables using techniques mentioned in chapter three. Specifically, the data analysis was based on specific objectives where patterns were examined, interpreted and implications drawn on them. The chapter starts with a preliminary analysis of the data before analyzing the study variables.

#### 4.2 Respondent Rate

The study sought to establish the respondent rate. Results indicate that the majority 286 (82.4%) of the questionnaires were returned while 61 (17.6%) were unreturned. The response rate is represented in



**Figure 4.1: Respondent Rate**

Based on recommendations by (Draugalis, Coons & Plaza 2008) indicating that response rates of approximately 60% should be the goal of researchers, this response

rate was found to be suitable for purposes of the study. The findings suggest that among the 286 of the respondents, 29.4% of them were from Nyeri, 17.5% of the respondents were from Taita Taveta, 10.5% of the respondents were from Kericho, 11.1% of the respondents were from Embu, 20.3% of the respondent were from Muranga and 11.8% of the respondents were from Bomet. The finding indicates that majority of the respondents were from Nyeri but it was worth noting that high rate of response was recorded by Kericho county which registered 93.8% of the expected sample size. Table 4.1 (a) and Table 4.1 (b) shows the distribution of the respondent.

**Table 4.1(a): Response Rate per County**

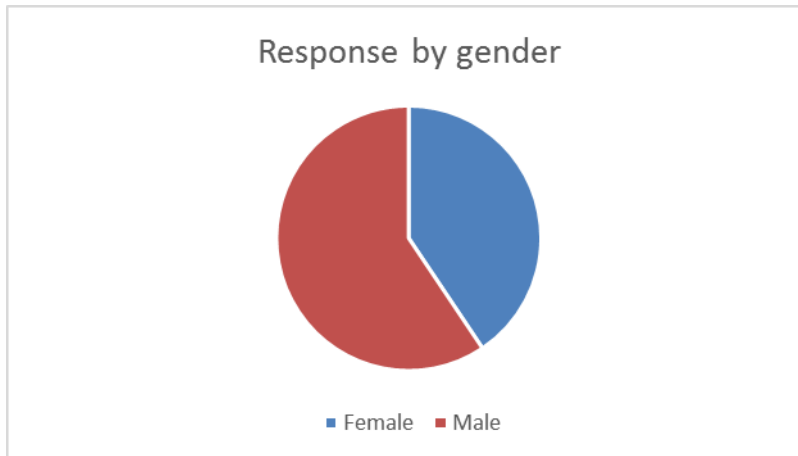
<b>Respondents * County Cross Tabulation</b>								<b>Total</b>
<b>Respondents</b>	<b>County</b>							
	<b>Nyeri</b>	<b>Taita Taveta</b>	<b>Kericho</b>	<b>Embu</b>	<b>Muranga</b>	<b>Bomet</b>		
Returned	Count 84	50	30	32	58	34	286	
	% 69.4%	84.7%	93.8%	87.2%	84.7%	88.2%	82.4%	
Unreturned	Count 37	9	2	5	4	4	61	
	% 30.6%	26.3%	6.2%	12.8%	15.3%	11.8%	17.4%	
Total	121	59	32	39	62	38	347	
	29.4%	17.5%	10.5%	11.1%	20.3%	11.8%	100%	

**Table 4.1(b): Response Rate**

<b>Response Rate</b>	<b>Frequency</b>	<b>Percent</b>
Returned	286	82.4%
Unreturned	61	17.4%
Total	347	100.00%

### **4.3: Response by gender**

The results of the study show that out of the 286 respondents, all the respondents responded positively and non-failed to indicate their gender. The male respondents were 170 (59.4%) while 116(40.6%) were female from the sampled health workers for within the sample counties in Kenya as indicated in table 4.2.



**Figure 4.2: Response by gender**

**Table 4.2: Response by gender**

	<b>Frequency</b>	<b>Percent</b>
Male	170	59.4
Female	116	40.6
Total	286	100.0

#### **4.4. Pilot study results**

A pilot study was conducted to establish whether the research instrument was valid and reliable for data collection. The testing was done using a sample of 40 questionnaires where reliability, validity and factor analysis was performed and findings were discussed.

##### **4.4.1 Reliability and Validity of Research Instrument**

Reliability of a measure indicates the extent to which it is without bias (error free) thus ensuring consistent measurement across time and the many items in the instrument. The reliability of the instrument was done out using Cronbach's alpha constant which is a measure of internal consistency and average correlation. It ranges between 0 and 1 (Kipkebut, 2010). As a rule of thumb acceptable alpha should be at least 0.70, (Mugenda & Mugenda, 2013). Higher alpha coefficient values mean there is consistency among items in measuring the concept of interest. Cronbach constant

test was carried out for every variable. For board size there were four items from the finding, no item was deleted and alpha coefficient recorded was 0.741 which is above 0.7. For Chief Executive Officer (CEO) duality, the alpha coefficient was again above the threshold. In this case, twelve items were tested and no item was expunged. Reliability test using cronbach alpha for Accountability Structures was conducted and out of twelve items, none of the items was deleted and the overall alpha coefficient was 0.791 which also above 0.7. Similarly, the Cronbach's alpha coefficient for Resource allocation was conducted and out of twelve items, none of the items was deleted. The overall alpha coefficient was 0.791 which also above 0.7. Table 4.4 shows the details of the finding. Lastly the alpha coefficient for Policy Framework and health care service delivery was found to be 0.821 and 0.832 respectively. In conclusion alpha test for the all the items were found to be reliable for measurement because the reliability coefficient was found to be above the recommended threshold of 0.7. The findings are shown in the Table 4.3.

**Table 4.3: Reliability of instruments**

<b>Variables</b>	<b>Cronbach's Alpha before removing some items</b>	<b>Cronbach's Alpha after removing Some items</b>	<b>No of Items before removing some factors</b>	<b>No of Items after removing some factors</b>
Board size	0.741	0.741	4	4
CEO duality	0.811	0.811	5	5
Accountability Structures	0.704	0.704	2	2
Resource allocation	0.791	0.791	12	12
Policy Framework	0.821	0.821	12	12
Health Care Service Delivery	0.832	0.832	12	12
<b>AVERAGE</b>	<b>0.783</b>	<b>0.783</b>		

#### 4.4.2 Factor Analysis

Factor analysis focuses on the internal-correlations among data to come up with internally consistent surrogates of the variable (Mugenda, 2010). Additionally, (Cooper & Schindler, 2014) suggested that factor loadings of 0.7 and above are acceptable. Other studies indicate that 0.4 is the minimum level for item loading. (Hair *et al.*, 2010) illustrates that factor analysis is necessary in research to test for construct validity and highlight variability among observed variables and to also check for any correlated variables so as to reduce the redundancy in data. In this study, factor analysis is used to reduce the number of indicators, which do not explain the effect of various organization behaviors on Health Care Service Delivery. Similarly, (Hair *et al.*, 1998) and (Tabachnick & Fidell, 2007) described the factor loadings as follows: 0.32 (poor), 0.45 (fair), 0.55 (good), 0.63 (very good) or 0.71 (excellent). Board size had 4 items and none of the items recorded factor loadings less than 0.40. The factor loadings of 4 items for Board size were ranging between 0.451 and 0.713. Besides that, an average factor loading of 0.734 was recorded therefore all the factors under scrutiny were considered to be valid for the constructs represented.

**Table 4.4 (a): Factor loadings for Board size**

<b>Board size</b>	<b>Factor Loadings</b>
<b>Members of the CHMT have been formally appointed</b>	<b>.713</b>
<b>The CHMT has adequate range of qualifications and experience to govern.</b>	<b>.560</b>
<b>The CHMT has consistent schedule of quarterly meetings</b>	<b>.451</b>
<b>The CHMT minutes are readily available for scrutiny</b>	<b>.702</b>
Total	.734

The study intended to measure the effect of Chief Executive Officer (CEO) duality by using 5 items. All the 5 had factor loadings above 0.40 that is between 0.582 and 0.721. Therefore, all the items were found to be valid for the constructs they

represented and could therefore be used in the study. In addition to that, an average factor loading of 0.619 was recorded as shown in Table 4.4(b). This implies that it is within the acceptable limit.

**Table 4.4 (b): Factor loadings for Chief Executive Officer (CEO) duality**

Chief Executive Officer (CEO) duality	Factor Loadings
The CHMT members are free from interests or relationship that could interfere with their duties	.721
The CHMT holds audit meetings regularly	.582
The CHMT recommendations are fully implemented	.812
CHMT members induction in cooperates session on conflict of interest	.611
External and internal stakeholders' feedback is systematically used to strengthen Health care service delivery	.634
<b>Total</b>	<b>.619</b>

The validity of Accountability Structures was also tested using an instrument comprising of two items and the result recorded. Subsequently no item was removed. Factor loadings recorded was between 0.448 and 0.586 as shown in Table 4.4(c). To be more specific, the quality of information provided to CHMT is appropriate to make decisions had factor of 0.586 which was way beyond 0.40. Also CHMT co-opts external members on needs basis had factor loadings of 0.548. This was also more than 0.40. Since no item recorded factor loading below 0.40, the items were considered valid to measure effect of Accountability Structures on health care Service Delivery in Kenya.

**Table 4.4 (c): Factor loadings for Accountability Structures**

Accountability Structures	Factor Loadings
i. The quality of information provided to CHMT is appropriate to make decisions	.586
ii. The CHMT co-opts external members on needs basis	.548
<b>Total</b>	<b>.521</b>



Resource allocation had seven items and from the original list of seven items put forward to measure the effect of Resource allocation, the Principle Component Analysis (PCA) method discarded no item. Factor loadings recorded was between 0.511 and 0.792 as shown in Table 4.4 (d). Specifically, CHMT co-opts external members on needs basis registered an average factor loading of 0.642 which was beyond 0.40. The County Health Management Team ensures financial statements reflect the county’s financial status recorded an average factor loading of 0.511. This was also more than 0.40. CHMT ensures full compliance with internal controls had an average factor loading of 0.683 while CHMT has a resources plan that is adhered to by stakeholders had the factor loading of 0.531, CHMT discuss thoroughly the annual budget before approving it had factor loading 0.621, The CHMT effectively communicates planned activities in a way that is easily understood had factor loading of 0.521 and lastly The CHMT is involved in staff transfers had an average factor loading 0.792. The result shows that all the items under consideration were valid table 4.4 shows the details of the finding

**Table 4.4 (d): Factor loadings for Resource allocation**

Resource allocation	Factor Loadings
The CHMT approves all health Annual Work Plans	.642
The CHMT ensures financial statements reflect the county’s financial status	.511
The CHMT ensures full compliance with internal controls	.683
The CHMT has a resource plan that is adhered to by stakeholders	.531
The CHMT discuss thoroughly the annual budget of the health before approving it	.621
The CHMT effectively communicates planned activities in a way that is easily understood.	.521
The CHMT is involved in staff transfers	.792
Total	.615

To measure the effect of Policy Framework on Health Care Service Delivery in Kenya 4 items were presented. The CHMT focuses its attention on policy issues had

an average factor loadings of 0.542, while the County Health Management Team is represented in intergovernmental meetings had average factor loadings of 0.628, the CHMT has enacted policies for the management of the health care service delivery in the county had an average factor loadings of 0.536. Lastly CHMT monitors the implementations of projects on a quarterly basis had a factor loading of 0.766. In total, the entire 4 items were found to have acceptable factor loadings of between 0.536 and 0.766 and subsequently all the items were considered valid for inclusion in the data collection instrument and further analysis. Table 4.4 (e) shows the factor loading for each item.

**Table 4.4: (e) Factor loadings for Policy Framework**

<b>Policy Framework</b>	<b>Factor Loadings</b>
i. The CHMT focuses its attention on policy issues	.542
ii. The CHMT is represented in intergovernmental meetings	.628
iii. The CHMT has enacted policies for the management of the health care service delivery in the county	.536
iv. CHMT monitors the implementations of projects on a quarterly basis	.766
<b>Total</b>	<b>.590</b>

To test the validity of Health Care Service Delivery, an instrument comprising ten items were considered as originally compiled from the literature. Subsequently no item, with low factor loading was discarded. The factor loadings were ranging between 0.587 and 0.786 as shown in Table 4.4(f). Besides that, the following factor loadings were recorded per item, in the last four years, the quality of health care services rendered by your county has greatly improved registered a factor loading of

0.593, In the last four years, drugs are always provided to all patients in the county government health facilities had a factor loading of 0.587, Equipment and supplies (exam tables, laboratory tests, pharmaceutical commodities, sterilization and disinfection) has greatly improved registered a factor loading of 0.786, management systems (adequate information system for clients, logistics systems, equipment maintenance) has greatly improved recorded factor loading of 0.622. In summary none of the items registered factor loading below 0.40.

**Table 4.4: (f) Factor loadings for Health Care Service Delivery**

<b>Health Care Service Delivery</b>	<b>Factor Loadings</b>
i. In the last four years, the quality of health care services rendered by your county has greatly improved	.593
ii. In the last four years, drugs are always provided to all patients in the county government health facilities	.587
iii. Equipment and supplies	.786
iv. Management systems (adequate information system for clients, logistics systems, equipment maintenance) has greatly improved	.622
v. County reporting systems (Health Management Information Systems) has improved	.643
vi. County infrastructure (water, electricity, latrines, infection control) has improved	.689
vii. In the last four years, medical practitioners to patient ratio has improved	.642
viii. In the last four years, the number of reported complaints has greatly reduced	.643
ix. In the last four years, working environment has improved	.689
x. In the last four years, hospital records have improved	.642
<b>Total</b>	<b>.658</b>

The overall summary of factor analysis for all the variables, the four factors measuring the independent variables and dependent variable are indicated in the Table 4.2; Board size show that all the factor loadings for the 14 items was 62.78%. All the items were retained based on the general rule of thumb for acceptable factor loading of 40% above. The results of the factor analysis for the Chief Executive Officer duality with twelve items yielded a factor loading of 60.02% after one factor was removed. The factor analysis for Accountability Structures, with twelve items shows factor loadings was 61.15%. Since all the loadings recorded was 60.15%, no factor was dropped because they followed the acceptable threshold. For Resource allocation, there were twelve items and no item was dropped and factor loading recorded was 60.58%. For Policy Framework out of twelve items, no item was dropped for inconsistency or irrelevance and factor loading was above 65.80%. Lastly, the result of the factors measuring the dependent variable shows that Health Care Service Delivery had six items and the factor loading was above 65.80 % with no item expunged from the list. All the factor loadings were above 52% which implies that all items fall within the acceptable threshold as indicated by the general rule of thumb.

**Table 4.5: Summary of Factor Analysis**

<b>Independent /Dependent Variables</b>	<b>Number of Items</b>	<b>Overall factor loading</b>	<b>Reliability Cronbach's alpha</b>
Board size	14	62.78%	0.712
Chief Executive Officer (CEO) duality	12	60.02%	0.811
Accountability Structures	12	61.15%	0.704
Resource allocation	12	51.50%	0.791
Policy Framework	12	59.80%	0.821
Health Care Service Delivery	12	65.80%	0.832

All the six constructs had factor loadings of between 0.792 and 0.835 (Table 4.3). in addition, (Hair et al. 1998) & (Tabachnick & Fidell, 2007) recommend a cut off factor of 0.40 on factor loadings in determining the factors to be retained for further analysis. Given that all the six constructs had factor loadings above the 0.4, they were all retained and used for further analysis.

## **4.5 Demographic Information of respondents**

### **4.5.1 Response by age**

The respondent were asked to indicate their age bracket and the responses recorded were as follows: 46- 55 years recorded 43.9% , Age 18-25 Years recorded 25.7% , age 26-35 Years recorded 30%, age 36-45 Years recorded 23% while age bracket above 50 years recorded 24%. The least were in the age bracket 9-20 years at 6%. 20 -29 years recorded 8.8%. These are employees who are yet to rise to management level, (see Table 4.6).

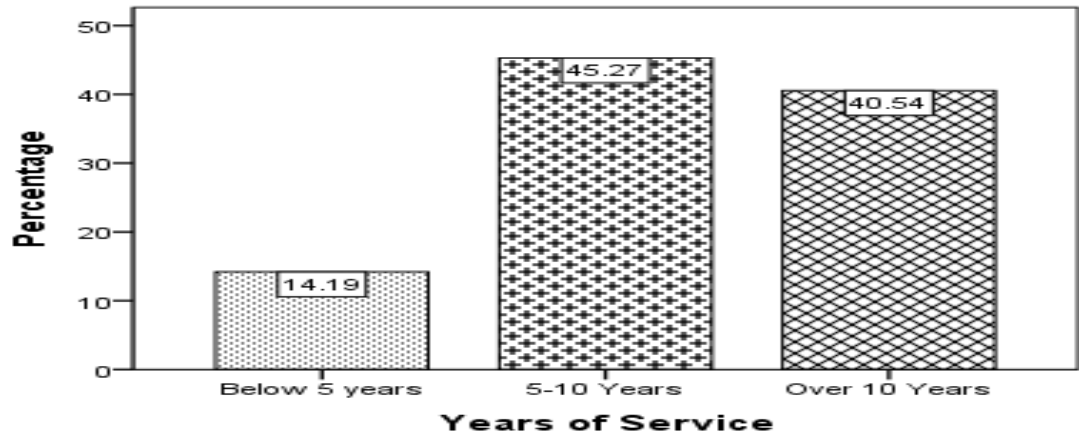
**Table 4.6: Age of respondents**

	Frequency	Valid Percent
18- 25 Years	6	4.1
26-35 Years	13	8.8
36-45 Years	26	17.6
46-55 Years	65	43.9
55 and above	38	25.7
Total	148	100.0

### **4.5.2 Length of Service**

The study needed to establish the length of service for all the respondents. The study findings were presented in Table 4.7. The study findings reveals that most of the majority (45.27%) of the respondents have worked for 5-10 years while 40.54% of the respondents have worked for more than 10 years, (14.19%) of the respondents have worked for less than 5 years. This implies that the respondents have worked in

the organization for a long period of time and therefore they were more likely to be aware of the issues that the questioner had addressed.



**Figure 4.3: Length of Service**

#### **4.5.3 Level of Education**

The respondents were asked to state their level of education and the response were as follows: - majority at 40.5% were Ordinary Diploma and Bachelor's Degree, while 8.8% were secondary, 7.4% were Master's Degree holders and lastly 2.7% were Doctorate Degree holders. From the finding, we can conclude that many employees are diploma and bachelor's degree holders. Table 4.7 shows the results of the finding.

**Table 4.7: Level of Education**

	Frequency	Valid Percentage
Secondary	13	8.8
Diploma	60	40.5
Bachelor's Degree	60	40.5
Master's Degree	11	7.4
Doctorate Degree	4	2.7
Total	148	100.0

#### **4.6 Descriptive Statistics for Board size**

The first objective of the study sought to determine the influence of Board size on Health Care Service delivery in Kenya. The respondents were asked to rate the extent do they agree or disagree with the following aspects of Board size on Health Care service delivery in Kenya. With an aim of knowing to what extent they agree or disagree that Members of the county health management team (CHMT) had been formally appointed (Board size); 40.6% of the respondents strongly disagreed, 44% disagreed 12.6% were neutral, 2.3% agreed and 0.6% strongly agreed. Besides that, on scale of 1 to 5, an average score rate of 3.87 was recorded with standard deviation of 0.888. This indicates that majority of the respondents agreed that members of the county health management team had been formally appointed. In regard to know the extent to which county health management team (CHMT) has adequate range of qualifications and experience to govern, 31.0% of the were of very great extent, 32.8% were of great extent 15.9% were Moderate extent, 6.6% were little extent while 13.7% did not at all. On scale of 1 to 5, an average score rate of 3.87 was recorded with standard deviation of 0.888. This indicates that majority of the

respondents agreed that county health management team (CHMT) has adequate range of qualifications and experience to govern.

To investigate if County Health Management Team (CHMT) has a consistent schedule of quarterly meetings was also rated as follows: 18.5% of the were of very great extent, 18.5% were of great extent 28.0% were Moderate extent, 21.0% were little extent while 14.0% did not at all. Out of a possible scale 5, an average score rate of 3.87 was recorded with standard deviation of 0.888. This also implies that majority of the respondents agreed that County health management team (CHMT) has consistent schedule of quarterly meetings. Concerning whether the county health management team (CHMT) minutes are readily available for scrutiny was rated as follows: 21.0% of the were of very great extent, 42.8% were of great extent 25.9% were Moderate extent, 16.6% were little extent while 3.7% did not at all. Out of a possible scale 5, an average score rate of 3.84 was recorded with standard deviation of 0.970. This also suggest that majority of the respondents agreed that the county health management team (CHMT) minutes are readily available for scrutiny.

**Table 4.8: Board size Descriptive Analysis**

<b>Statement</b>	<b>S.D</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>S.A</b>	<b>Mean</b>	<b>Std. Deviation</b>
CHMT had been formally appointed county health management team	0.6%	2.3%	12.6%	44%	40.6%	4.22	0.794
CHMT has adequate range of qualifications and experience to govern	4.6%	7.4%	22.3%	38.3%	26.9%	3.76	1.072
CHMT has consistent schedule of quarterly meetings	1.7%	9.7%	25.1%	38.3%	25.1%	3.75	0.995
CHMT minutes are readily available for scrutiny	2.3%	3.4%	16.6%	50.3%	27.4%	3.97	0.887
<b>Total</b>						<b>3.84</b>	<b>0.970</b>

Key: SD- Strongly Agree; D-Disagree, N- Neutral, A- Agree, SA- Strongly Disagree



The study findings collaborate with Golden and Zajac, (2001) who surveyed 3198 USA hospitals and found that the relationship between board size and strategic decisions was non-linear. They find that as board size increased for smaller boards, there was a positive effect on the organisation's strategic decisions but further increases in board size led to negative effects on strategic decisions. In other words, an increase in the number of directors on an existing large board would reduce its efficiency. Further, the findings are in concurrence with (Kiel & Nickelson, 2003) studies that examined the relationships between board demographics and corporate performance in 348 of Australia's largest publicly listed companies and described the attributes of these organisations and their boards. They find that board size is positively correlated with organisation value. In addition, (Chaganti, Mahajan & Sharma, 1985) reported that in a paired sample of non-failed and failed organisations, non-failed organisations had larger boards than failed organisations. The study conducted by (Bozec & Dia, 2005) for the Canada's state-owned enterprises found a positive relationship between board size, board independence and organisation technical efficiency.

However, Yermack's, (1996) seminal paper presented evidence of a negative effect of board size on performance. Moreover, the board's role is to actively question the CEO and seek for open information and open dialogue in order to have an effective decision-making process (Kiel & Nicholson, 2003). A strong and independent Board of Directors is therefore the bedrock on which effective corporate governance must be founded (Parker, 1994). There is plenty of evidence to show that a weak and inefficient board will sooner or later allow even a good company to falter, lose its way, and perhaps even fail.

#### **4.6.1 Descriptive Statistics for Chief Executive Officer (CEO) duality**

The second aim of the study was to determine the influence of Chief Executive Officer (CEO) duality indicators on Health Care Service Delivery in Kenya. The respondents were asked to rate their opinion regarding whether the county health

management team (CHMT) members are free from interests or relationship that could interfere with their duties. The findings based on Table 4.9. suggest that significant majority of 36.8% of the respondents agreed that they are free from such relationship while 35.6% were neutral, 13.8% strongly agreed, a total of 13.8% either disagree or strongly disagreed. Based on scale 1 to 5, an average score rate of 3.87 was recorded with standard deviation of 0.888. This could also be interpreted that majority of the respondents accepted that the county health management team (CHMT) members are free from interests or relationship that could interfere with their duties.

On whether County Health Management Team (CHMT) holds audit meetings regularly, over 47.4% of the respondents agreed, 29.1% strongly agreed while 4.3% either disagree or strongly disagreed and 18.3% remained neutral. An average score rate of 3.87 was recorded with standard deviation of 0.888, again suggesting that the respondents agreed that health management team (CHMT) holds audit meetings regularly. The question on whether health management team (CHMT) recommendations are fully implemented. Majority of the respondents 52.6% agreed, some 27.4% of the respondents strongly agreed, 14.9 were neither here nor there, 5.1% just disagreed and none strongly disagreed. An average score of 3.99 out of 5 and standard deviation was recorded showing that health management team (CHMT) recommendations are fully implemented. To find out whether health management team (CHMT) members induction in cooperates session on conflict of interest, 41.4% of the respondents agreed, 39.1% strongly agreed while 5.3% either disagree or strongly disagreed and 16.3% remained neutral. An average score of 3.99 out of 5 and standard deviation was registered showing that health management team (CHMT) members induction in cooperates session on conflict of interest. Lastly, to confirm whether external and internal stakeholders' feedback was systematically used to strengthen health care service delivery (CEO duality 4), 41.4% of the respondents agreed, and 39.1% strongly agreed while 5.3% either disagree or strongly disagreed and 16.3% remained neutral. An average score of 3.99 out of 5 and standard deviation was registered showing that external and internal

stakeholder’s feedback was systematically being used to strengthen health care service delivery. In general, average rate of responses was 3.94 out of possible 5 with standard deviation of 1.006 confirming that Chief Executive Officer (CEO) duality influences health care Service Delivery. The rest of the findings are shown in Table 4.10.

**Table 4.10: Chief Executive Officer (CEO) duality descriptive Statistics**

<b>Statement</b>	<b>S.D</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std. Deviation</b>
CHMT members are free from interests that could interfere with their duties	2.9%	10.9%	35.6%	36.8%	13.8%	3.48	0.960
CHMT holds audit meetings regularly	2.9%	2.3%	18.3%	47.4%	29.1%	3.98	0.909
CHMT recommendations are fully implemented	0.0%	7.4%	19.4%	49.1%	23.4%	4.11	3.075
CHMT members induction in cooperates session on conflict of interest	0.0%	5.1%	14.9%	52.6%	27.4%	3.90	0.920
External and internal stakeholders’ feedback was systematically used to strengthen health care service delivery	0.6%	5.1%	17.7%	50.3%	26.3%	4.02	0.795
<b>Total</b>						<b>3.94</b>	<b>1.066</b>

The study findings are in harmony with (Vafeas & Theodorou, 1998) who concluded that that CEO duality helped in reducing the costs that related to extra compensations or managerial remunerations. In addition, (Bozec, 2005; Abor, 2007; Sheikh et al., 2012) concluded that CEO duality improves the accountability of the organisation by providing easier methods to identify and to blame the CEO with any poor performance. However, the study findings contradict those by (Rechner & Dalton 1991) in their study of 141 large companies who used accounting measurements such as Profit Margin and Return on Investment from 1978 to 1983 and found that organisations with separated boards perform better than organisations that have CEO duality in their boards. According to Dahya et al. (1996) investigated the CEO duality in the UK for listed companies; they find that the stock market is more

favourable when the two roles are split from each other. In addition, a study by Haniffa & Hudaib, (2006) considered the effect of the role of CEO duality on organisation performance for 347 Malaysian organisations. They report that splitting the two roles from each other resulted in better financial performance.

#### **4.6.2 Descriptive Statistics for Accountability Structures**

The study wanted to assess the influence of Accountability Structures on Health Care Service Delivery in Kenya. The respondents were asked to state their level of agreement with the following items based on Accountability Structures and how they are associated with Health Care Service Delivery in Kenya. The findings were as follows: On whether quality of information provided to county health management team CHMT is appropriate to make decisions, 46.9% of the respondents agreed and 24.6% strongly agreed, 20.6% were neutral, 7.4% disagreed and only 0.6% of the respondents strongly disagreed. On scale of 1 to 5, an average score rate of 3.87 was recorded with standard deviation of 0.488. This indicates that majority of the respondents at the county's agreed that quality information was provided to county health management team (CHMT) and it was appropriate for making decisions.

In addition to that, to confirm if county health management team (CHMT) co-opts external members on needs basis, 34.9% of the respondents agreed, 19.4% strongly agreed, 29.7% were undecided 13.7% disagreed and 2.3% strongly disagreed. An average score rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management team CHMT co-opts external members on needs basis. The findings suggest that accountability structures have significance influence on Health Care Service Delivery.

**Table 4.11: Accountability Structures Descriptive Statistics**

<b>Statement</b>	<b>S. D</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>S. A</b>	<b>M</b>	<b>Std. Dev</b>
Quality of information provided to county CHMT is appropriate to make decisions	0.6	7.4%	20.6%	46.9%	24.6%	3.87	0.89
If CHMT co-opts external members on needs basis,	2.3	13.7%	29.7%	34.9%	19.4%	3.56	1.03
<b>Total</b>						<b>3.78</b>	<b>1.067</b>

The study findings are consistent with Nurunnabi & Islam, (2011) who found out that accountability mainly depends on government initiatives and effectively implementing existing laws. Further, Lodhia & Burritt, (2010) signpost that, state institutions must be subjected to strict scrutiny in explaining the causes and consequences of any difficulties encountered in the process of executing their mandates. However, the finding contradicts (Jishnu, Alaka, Aakash, & Karthik, 2016) who suggests that in India, 80% of the medical doctors agree that rules and norms are frequently flouted and payments are made to avoid any disciplinary proceedings and thus accountability for the resources entrusted with the medical doctors is compromised.

Following the accountability approach in the health care service delivery chain, authors such Deininger & Mpuga (2004) address the question as to whether greater accountability leads to better health care service delivery. Further, Segal & Summers (2002) concluded that accountability is government's obligation to demonstrate effectiveness in carrying out goals and producing the types of services that the public wants and needs.

#### **4.6.3 Descriptive Statistics for Resource allocation**

The third objective of the study was to determine the influence of resource allocation on health care Service delivery in Kenya. The respondents were asked to rate the

extent to which they agree or disagree that county health management team (CHMT) approves all health Annual Work Plans. 40.6% strongly disagreed, 44% disagreed 12.6% were neutral, 2.3% agreed and 0.6%strongly agreed. An average score rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management team (CHMT) approves all health annual work plans. In regard to know the extent to which county health management team (CHMT) ensures financial statements reflect the county's financial status, 31.0% of the were of very great extent, 32.8% were of great extent 15.9% were Moderate extent, 6.6% were little extent while 13.7% did not at all. An average score rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management. An average score rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management (CHMT) ensures financial statements reflect the county's financial status.

The County Health Management (CHMT) ensures full compliance with internal controls: 18.5% of the respondents were of very great extent, 28.0% were Moderate extent, 21.0% were little extent while 14.0% did not at all. Mean rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management (CHMT) ensures full compliance with internal controls. Concerning whether county health management team (CHMT) had a resource plan that was adhered to by stakeholders: 30.6% strongly disagreed, 44% disagreed 22.6% were neutral, 12.3% agreed and 10.6%strongly agreed. Mean rate of 3.56 was recorded with standard deviation of 1.026. This suggests that the county health management (CHMT) ensures full compliance with internal controls. To find out if county health management team (CHMT) normally discuss thoroughly the annual budget of the before approving it, the results were as follow:- 50.6% strongly disagreed, 44% disagreed 11.6% were neutral, 2.3% agreed and 0.6% strongly agreed and the rest of the finding are shown in table 4.23. Mean rate of 3.56 was recorded with standard deviation of 1.026 indicating that the county health management (CHMT) normally discusses thoroughly the annual budget of the health before approving it. In overall mean of 4.65 was recorded and standard deviation of 1.265. The finding suggests

that resource allocation had significance influence on health care service delivery. Table 4.12 shows the details of the finding.

**Table 4.12: Resource allocation Descriptive Statistics**

<b>Statement</b>	<b>S.D</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>S.A</b>	<b>Mean</b>	<b>Std. Deviation</b>
CHMT approves all health Annual Work Plans.	0.6%	2.3%	12.6%	44%	40.6%	4.22	0.794
CHMT ensures financial statements reflect the county's financial status	4.6%	7.4%	22.3%	38.3%	26.9%	3.76	1.072
CHMT ensures financial statements reflect the county's financial status	1.7%	9.7%	25.1%	38.3%	25.1%	3.75	0.995
CHMT ensures full compliance with internal controls	2.3%	3.4%	16.6%	50.3%	27.4%	3.97	0.887
CHMT discusses the annual budget of the health before approving it	2.3%	14.4%	26.4%	36.2%	20.7%	3.59	1.043
The CHMT effectively communicates planned activities	13.1%	31.4%	24.6%	17.7%	13.1%	4.22	0.794
The CHMT is involved in staff transfers	1.7%	7.4%	12.0%	58.9%	19.4%	3.76	1.072
<b>Total</b>						<b>3.84</b>	<b>0.970</b>

**Key:** SD- Strongly Agree; D-Disagree, N- Neutral, A- Agree, SA- Strongly Disagree

The study findings are in harmony with Green, (2000) who concluded that the resource allocation is a critical component of any decentralization policy, albeit often neglected. Further, Kinnunen et al (1998) had noted that, 'although prioritization has

been a much-discussed topic both nationally and internationally, there is a general lack of studies based on empirical evidence'. These points are supported by this review where few studies were found that examined the link between health budgeting and resource allocation processes and its equity implications. Possibly this is as a result of low policy priority given to this issue by government and health authorities of country examples explored in this review. According to El-Nafabi, (2009) when studying the role of public sector audit and financial control systems in Sudan, found that audit and control system is paramount in ensuring accountability for the use of public funds, and safeguarding the limited public resources against corruption and other misappropriation and unlawful practices. The study found out that weak and ineffective financial control systems and deficiencies in accounting systems are some of facilitating factors of financial corruption in Sudan. Furthermore, so as to meet the bloated financing demands of both levels government, there is need for increased efficiency and effectiveness in utilization of scarce public resources (Mugambi & Theuri, 2014).

#### **4.6.4 Descriptive Statistics for Policy Framework**

The fifth objective of the study was to assess the moderating effect of Policy Framework on health care service delivery in Kenya. On a similar way to the previous variables, the respondents were asked to state their level of agreement with the following items based on Policy Framework and how they are associated with county health care service delivery in Kenya. The result was as follows: On whether the CHMT focuses its attention on policy issues, 59.5% of the respondents agreed and 11.9% strongly agreed, 16.7% were neutral, 11.9% disagreed and only 0.0% of the respondents strongly disagreed. An average score rate of 3.71 was recorded with standard deviation of 0.844. This indicates that respondents agreed that the county health management team focuses its attention on policy issues. On whether county health management team is represented in intergovernmental meetings, 59.5% of the respondents agreed, 7.1% strongly agreed, 28.6% were undecided 4.8% disagreed and 0.0% strongly disagreed. An average score rate of 3.68 was recorded with



standard deviation of 0.687. This suggests that county health management team is represented in intergovernmental meetings.

The respondents were asked whether The CHMT has enacted policies for the management of the health care service delivery in the county. 57.1% of respondents agreed, 16.7% strongly agreed, 21.4% were undecided but 4.8% disagreed and 0.0% strongly disagreed. Average scale of 3.85 out possible 5 and standard deviation of 0.760 was recorded. This means that the respondent was in agreement that the county health management team had enacted policies for the management of the health care service delivery in the county. To find out CHMT monitors the implementations of projects on a quarterly basis. Majority of the respondents at 46.3% were undecided, 19.5% agreed, 4.9% strongly agreed, but 19.5% disagreed and 9.8% strongly disagreed. Average score rate was 2.90 out of 5 and standard deviation of 0.995 was recorded. This also indicates the respondents were undecided that county health management team monitors the implementations of projects on a quarterly basis.

**Table 4.13: Policy Framework Descriptive Statistics**

<b>Statement</b>	<b>S.D</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>S. A</b>	<b>Mean</b>	<b>Std. Dev</b>
CHMT focuses its attention on policy issues	0.0%	11.9%	16.7%	59.5%	11.9%	3.71	.844
CHMT is represented in intergovernmental meetings	0.0%	4.8%	28.6%	59.5%	7.1%	3.68	.687
CHMT has enacted policies for the management of the health care service delivery in the county	0.0%	4.8%	21.4%	57.1%	16.7%	3.85	.760
CHMT monitors the implementations of projects on a quarterly basis	9.8%	19.5%	46.3%	19.5%	4.9%	2.90	.995
<b>TOTAL</b>						<b>3.51</b>	<b>1.102</b>

The findings are in agreement with Navarro, (2006) who found out that redistributive policies are positively linked with health outcomes. Further, Glassman, Deborah, & Pat Sullivan, (2008) postulated that policy framework is critical to guide objectives. Further, they argued that it is important to have policy for a decentralized system to function efficiently. Similarly, Lewis, (2006) argues that the use of power is crucial to the health policy processes. He used a policy and social networks approach to examine the power of the medical profession in Australia. The public policy analysis perspective includes the politics of health care, the study of relationships and power transactions among policy actors. It recognizes that politics affects the origins, formulation, and implementation of public policy in the health sector (Glassman et al. 2008). The main aim of the health national policy is to achieve value and accountability and it is important to integrate all policies with Kenya's Vision 2030

and the corresponding Medium-Term Plan II. Further, there is need to integrate with other policies such as procurement policy. Further, the policies should be in tandem with the corresponding medium term.

#### **4.6.5 Descriptive Statistics for Health Care Service Delivery**

In this section we are concerned with descriptive analysis of the dependence variable (Health Care Service Delivery). The respondents were asked to state their level of agreement on the following items as far as health care service delivery in Kenya is concerned. The findings were as follows: On whether in the last four years, the quality of health care services rendered by the county has greatly improved, 41.1% of the respondents agreed and 49.7% strongly agreed, 6.9% were undecided, 1.7% disagreed and only 0.6% of the respondents strongly disagreed. An average score rate of 4.38 was recorded with standard deviation of 0.0739. This suggests that majority of the respondents agreed that in the last four years, the quality of health care services rendered in their county had greatly improved. Concerning whether in the last four years, drugs are always provided to all patients in the county government health facilities, majority of the respondents strongly disagreed at 54.3%, 37.1% agreed, 6.9% were neutral, 1.1% agreed and 0.6% strongly disagreed. This also indicates that majority of the respondents agreed that in the last four years; drugs were always provided to all patients in the county government health facilities with an overall mean rate of 2.23 and standard deviation 0.723. In addition to that, to establish whether equipment and supplies has greatly improved, 40.6% of the respondents agreed, 41.7% strongly agreed, 13.7% were undecided 2.9% disagreed and 1.1% strongly disagreed. An average score rate of 4.19 was recorded with standard deviation of 0.86. This also indicates that majority of respondents agreed that the equipment's and supplies of examination tables, laboratory tests, pharmaceutical commodities, sterilization and disinfection had greatly improved.

The Respondents were asked whether the Management systems (adequate information system for clients, logistics systems, and equipment maintenance) had greatly improved, 42.3% of respondents agreed, 45.1% strongly agreed, 8.6% were undecided but 3.4% disagreed and 0.6% strongly disagreed. In the study, an average scale of 4.28 out possible 5 and standard deviation of 0.80 was recorded. This means that Management systems (adequate information system for clients, logistics systems, equipment maintenance) had greatly improved. On whether Service County reporting systems (Health Management Information Systems) had improved, majority of the respondents at 35.4% agreed, 37.7% strongly agreed, 24.0% were undecided but 2.9% disagreed and 0.0% strongly disagreed. Mean score of 4.20 out of 5 and standard deviation of 0.832 was recorded. In general, the respondents were in agreement as far as the items listed under Health Care Service Delivery. The rest of the findings are shown in Table 4.14.

**Table 4.14: Health Care Service Delivery Descriptive Statistics**

Statement	S.D	D	N	A	S. A	Mean	Std. Dev
The quality of health care services rendered by the county has greatly improved	0.6%	1.7%	6.9%	41.1%	49.7%	4.38	0.739
In the last four years, drugs are always provided to all patients in the county government health facilities	0.6%	1.1%	6.9%	37.1%	54.3%	4.43	0.723
The drugs are always provided to all patients in the county government health facilities	1.1%	2.9%	13.7%	40.6%	41.7%	4.19	0.860
Has equipment and supplies has improved	0.6%	3.4%	8.6%	42.3%	45.1%	4.28	0.807
The Management systems has improved	0.0%	2.9%	24.0%	35.4%	37.7%	4.08	0.854
The Health Care Service County reporting systems had improved	0.0%	4.6%	12.6%	45.1%	37.7%	4.16	0.815
County infrastructure has improved	0.6%	1.1%	6.9%	37.1%	54.3%	4.43	0.723
In the last four years, medical practitioners to patient ratio has improved	1.1%	2.9%	13.7%	40.6%	41.7%	4.19	0.860
In the last four years, the number of reported complaints has greatly reduced	0.6%	3.4%	8.6%	42.3%	45.1%	4.28	0.807
In the last four years, working environment has improved	0.0%	2.9%	24.0%	35.4%	37.7%	4.08	0.854
Total						4.20	0.832

Key: SD- Strongly Agree; D-Disagree, N- Neural, A- Agree, SA- Strongly Disagree

The study findings are in harmony with (Ackerman and Jenkins, 2005) who postulated that accountability provides better opportunities for the poor. On the other hand, Le Grand, (2009) describes the desired characteristics of public services as high quality services, managed efficiently, and delivered equitably. He argues that models of service delivery such as trust, voice, and command and control, have not given the right incentives to provide service. Instead, he proposes a choice and competition model, where user choice together with provider competition, can offer better incentives to providers in order to deliver high quality services efficiently. Further, this is line with the Health Act 2016 which takes into consideration the functional responsibilities between the National and the County governments and their reporting and management requirements. In addition, provision of quality core health care services to the population as mandated by law (COK, 2010). Furthermore, Governments world over exist to provide improved health care services to the public.

#### **4.7 Diagnostic Tests**

##### **4.7.1 Identity Correlation Matrix Test**

Factor analysis was conducted to ascertain the suitability of all the factors observed within the five variables. First correlation matrix was obtained for all the factors and scrutinized for chances of Multicollinearity among the items. Correlation matrix gives the correlation coefficients between a single factor and every other factor in the investigation. The correlation coefficient between a factor and itself is always 1; hence the principal diagonal of the correlation matrix contains 1s. This therefore means it is an identity matrix (Kothari, 2009). According to Tables 1,2, 3, 4, 5 and 6 of correlation Matrices in appendix III, there was no Multicollinearity amongst the observed factors for the variable under investigation and the matrices were also identity matrices. Further analysis using the determinants of the correlation matrices shown at the foot of each table indicates that the matrices obtained were all identity matrices since the determinants were all greater than 0.00001, so there was no

problem of Multicollinearity for all the variables. In addition to that, Bartlett's Test of Sphericity shown in Table 4.10 suggest that the matrices obtained in appendix III were all identify matrices since the p-values were all  $0.000 < 0.05$ .

#### **4.7.2 Sample Adequacy Test (Kaiser-Meyer- Olkin (KMO))**

The sample adequacy was measured using Kaiser-Meyer- Olkin (KMO) test. The sampling adequacy should be greater than 0.5 for a satisfactory factor analysis to proceed. A common rule is that a researcher should have 10 – 15 participants per variable. A factor analysis is inappropriate when the sample size is below 50 (Field, 2005). Kaiser (1974) recommends 0.5 as minimum (barely accepted), values between 0.7- 0.8 acceptable, and values above 0.9 are superb. From Table 4.15, the sample was acceptable since the KMO values were mainly between 0.707 and 0.810. The least value was 0.644, which was also good enough since it was above the minimum of 0.5.

**Table 4.15: KMO and Bartlett’s test**

Variables	Measure			
Board size	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.707
	Bartlett's Sphericity Test		of Approx. Chi-Square	300.162
CEO duality	Kaiser-Meyer-Olkin Adequacy.		of df	45
	Bartlett's Sphericity Test		Sig.	.000
Accountability Structures	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.764
	Bartlett's Sphericity Test		of Approx. Chi-Square	426.463
Allocation of Resources	Kaiser-Meyer-Olkin Adequacy.		df	55
	Bartlett's Sphericity Test		Sig.	.000
Policy Framework	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.644
	Bartlett's Sphericity Test		of Approx. Chi-Square	304.174
Health Care Service Delivery	Kaiser-Meyer-Olkin Adequacy.		df	28
	Bartlett's Sphericity Test		Sig.	.000
	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.810
	Bartlett's Sphericity Test		of Approx. Chi-Square	321.121
	Kaiser-Meyer-Olkin Adequacy.		df	28
	Bartlett's Sphericity Test		Sig.	.000
	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.821
	Bartlett's Sphericity Test		of Approx. Chi-Square	350.593
	Kaiser-Meyer-Olkin Adequacy.		df	28
	Bartlett's Sphericity Test		Sig.	.000
	Kaiser-Meyer-Olkin Adequacy.		Measure of Sampling	.736
	Bartlett's Sphericity Test		of Approx. Chi-Square	442.465
	Kaiser-Meyer-Olkin Adequacy.		df	66
	Bartlett's Sphericity Test		Sig.	.000

#### 4.8 Normality test

##### 4.8.1. Skewness and Kurtosis test for normality

The study sought to find out how well the distribution could be approximated using the normal distribution. Consequently, Skewness and Kurtosis was used as shown in Table 4.11. The Skewness measures the deviation of distribution from symmetry



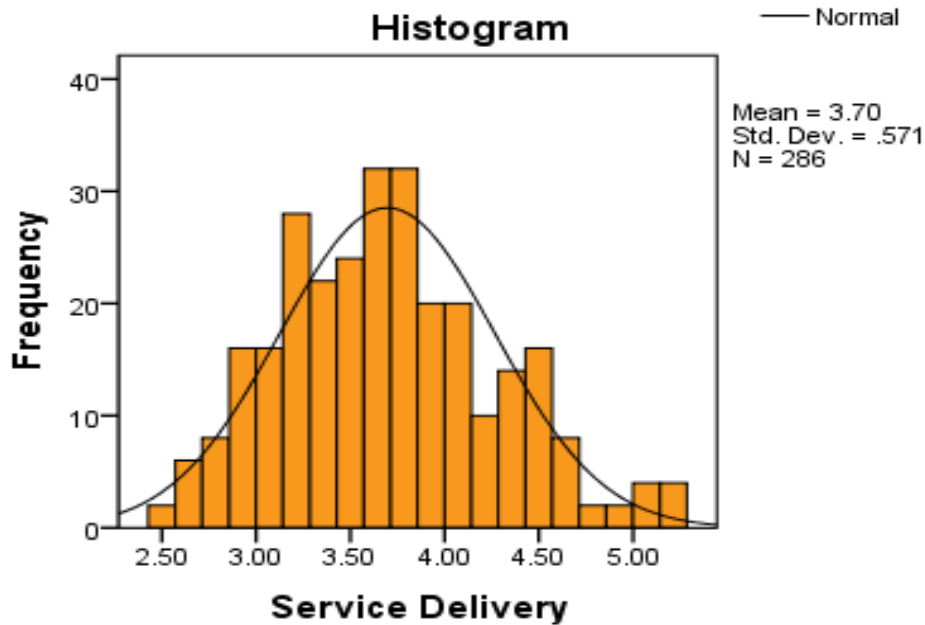
whereas Kurtosis measures peakness of distribution (Ming'ala, 2002). The values of Kurtosis and Skewness should be zero in normal distribution (Field, 2009) but the acceptable range of values is +3 to -3. Alternatively, z-score values can be used to establish normality. In this case values between +1.96 to -1.96 are allowed according Mugenda, (2010). From the findings both the skewness and kurtosis values together with z- score values were within the acceptable range hence the data set was considered to be normally distributed.

**Table 4.16: Skewness and Kurtosis**

<b>Variables</b>	<b>Descriptive</b>	<b>Statistic</b>	<b>Std. Error</b>	<b>Z score</b>
Board size	Std. Deviation	4.43031		
	Skewness	-.087	.231	-0.396
	Kurtosis	-.324		-0.736
CEO duality	Std. Deviation	6.21785	.459	
	Skewness	.176	.231	0.800
	Kurtosis	.385	.459	0.875
Accountability Structures	Std. Deviation	6.17376		
	Skewness	-.546	.231	-1.241
	Kurtosis	1.156	.459	1.627
Policy Framework	Std. Deviation	4.53901		
	Skewness	-.875	.231	-1.978
	Kurtosis	1.163	.459	1.644
Health Care Service Delivery	Std. Deviation	8.27604		
	Skewness	-.192	.231	-0.873
	Kurtosis	.486	.459	1.105

Although it is assumed in multiple linear regressions that the residuals are distributed normally it is a good idea before drawing final conclusions, to review the distributions of major variables of interest (Ming'ala, 2002). Histograms are a good way of getting an instant picture of the distribution of data (Field, 2009). Therefore, a histogram was also employed in the study to test the normality of the dependent variable as shown in Figure 4.4 since t- test, regression and ANOVA are based on the assumption that the data were sampled from a Gaussian distribution (Indiana, 2011). Hence, both tests were greater than the significance level (0.05), the health care service delivery data is normal. Hence, the study concluded that health care

service delivery variable is normal in distribution and hence subsequent analysis were carried out.



**Figure 4.4: Histograms for normality test**

#### **4.8.2 Kolmogorov- Smirnov and Shapiro Wilk test for Normality**

Kolmogorov- Smirnov and Shapiro Wilk test was also used to test the normality of all the variables. They compare the scores in the samples and check whether they have the same mean or standard deviation. The findings for Kolmogorov- Smirnov show that, the p- values were greater than 0.05 indicating that the distributions were normally distributed. It was the same case with Shapiro-Wilk. The details of the findings are shown in Table 4.17 below.

**Table 4.16: Kolmogorov-Smirnov and Shapiro-Wilk**

	Kolmogorov-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.
Board size	.057	286	.028	.983	286	.002
CEO duality	.051	286	.069	.990	286	.042
Accountability Structures	.046	286	.200*	.991	286	.093
Resource allocation	.043	286	.200*	.977	286	.000
Policy Framework	.056	286	.030	.985	286	.004

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Hence, the study concluded that p- values were greater than 0.05 indicating that the distributions were normally distributed.

#### **4.8.3 Normality using Q-Q plot**

The Figure 4.5 also shows normal Q-Q plot for the dependent variable, health care Service Delivery in Kenya. Further, this indicates that the observed value was falling along a straight line. This therefore means the variable was normally distributed which was consistent with the earlier findings based on skewness and Kurtosis test, Kolmogorov- smirnov and Shapiro wilk test.



**Figure 4.5 Q-Q plot**

The study concluded the Q-Q plot was normally distributed which is consistent with previous findings based on Kurtosis, skewness Kolmogorov- smirnov and Shapiro wilk test.

#### **4.8.4 Outliers test**

The result shown in Table 4.17 depicts that an outlier which may be described as any observation far from the rest of other observations. The presence of outlier in any given data may make the data not to assume condition that is normal. It is therefore important to test the existence of outliers in any given data and even remove them for normality condition to be satisfied.

**Table 4.17: Outliers Detected**

<b>Variables</b>	<b>Position observed outliers</b>	<b>of Total number of outliers</b>
Board size	-	1
Chief Executive Officer (CEO) duality	31 ,85	8
Accountability Structures	-	1
Resource allocation	36,	7
Policy Framework	-	4
Health Care Service Delivery	100	4

#### **4.8.5 Collinearity test**

When an eigen value is larger than the others then the uncentered cross products matrix can be highly affected by small changes in the independent variables or outcome. If the eigenvalues are fairly similar then the model obtained is likely to be unchanged by small changes in measured variables (Myers, 1990). According to the study findings both models had eigenvalues fairly larger than the rest indicating that the models obtained were likely to be changed by small changes in measured variable. The condition index is another way of expressing eigenvalues and they represent square root ratio of the largest eigenvalue to the eigenvalue of interest. The condition index should be 1 for the dimension with the largest eigenvalue, however, the condition index value can be larger than 1. Large values may indicate that collinearity exist but it is also worth noting that there is no specific value or rule about how large the condition index value should be to indicate collinearity problems. According to the findings in Table 4.18 model 1 and model 2 had final condition index values 34.243 and 34.243 respectively. The values for dimensions in each model were the same with each other and therefore there was no collinearity. Alternatively, collinearity may be detected looking for Predictors that have high variance proportions on the same small eigenvalues. High variance proportions

indicate that the variances of their regression coefficients are dependent. In this study 49% of the variance in regression coefficient of Board size was associated with eigenvalue in dimension number 4, 41% of the variance in the regression coefficient of Chief Executive Officer (CEO) duality was associated with eigen value in dimension 5, 44% of the variance in the regression coefficient of Accountability Structures was linked with eigen value in dimension 3 and 39% of the variance in the regression coefficient of Resource allocation was associated with eigen value in dimension 2. This evidently showed that there was no dependency between the three predictor variables for model 1. In the presence of moderator collinearity exist since variance in the regression coefficient of Chief Executive Officer (CEO) duality and Resource allocation were associated with eigen value in dimension 4 that 71% and 49% respectively.

**Table 4.18: Collinearity test**

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	x <sub>1</sub>	x <sub>2</sub>	x <sub>3</sub>	x <sub>4</sub>
Model1	1	4.971	1.000	.00	.00	.00	.00	.00
	2	.012	20.741	.51	.02	.00	.06	.39
	3	.008	25.240	.22	.40	.01	.44	.34
	4	.005	31.284	.00	.49	.28	.32	.26
	5	.004	34.286	.27	.09	.71	.19	.01
				(Constant)	x <sub>1</sub> *z	x <sub>2</sub> *z	x <sub>3</sub> *z	x <sub>4</sub> *z
Model 2	1	4.971	1.000	.00	.00	.00	.00	.00
	2	.012	20.741	.51	.02	.00	.06	.29
	3	.008	25.240	.22	.40	.01	.14	.34
	4	.005	31.284	.00	.49	.28	.32	.36
	5	.004	34.243	.26	.09	.71	.49	.01

Dependent Variable: Health Care Service Delivery

Model 1:-Absence of Moderator while Model 2:- Presence of Moderator

#### 4.8.6 Correlation Analysis of Independent Variables

Correlation analysis gives the association between variables. In this study, Pearson product moment correlation coefficient (*r*'s) was used to establish the association between independent variables. The correlation coefficients are summarized in Table

4.15. The findings also reveal that there was significant relationship between the independent variables since all the p-values were less than 0.01 that is p-values  $0.000 < 0.01$ . Even though there was a significant relationship between the independent variables, there was no problem of multi-collinearity among the variables since all the r values were less than 0.8 as suggested by Tabachnick and Fidel, (2007). Therefore, it could be averred convincingly that there was a significant relationship between corporate governance and health care service delivery.

**Table 4.19: Correlation Analysis of Independent Variable without Moderator Policy Framework**

		Board size	Chief Executive Officer (CEO) duality	Accountability Structures	Resource allocation
Board size	Pearson Correlation	1	.578**	.667**	.526**
	Sig. (2-tailed)		.000	.000	.000
	N	286	286	286	286
CEO Duality	Pearson Correlation	.578**	1	.696**	.666**
	Sig. (2-tailed)	.000		.000	.000
	N	286	286	286	286
Accountability Structures	Pearson Correlation	.667**	.696**	1	.682**
	Sig. (2-tailed)	.000	.000		.000
	N	286	286	286	286
Resource allocation	Pearson Correlation	.526**	.666**	.682**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	286	286	286	286

\*\* . Correlation is significant at the 0.01 level (2-tailed).

In the presence of moderator, correlation coefficient r values were above 0.8 and the relationship among the independent variable was significant. Since the r values were above 0.8, Tabachnick and Fidel, (2007) rule of thumb was contradicted hence probably there was a problem of multicollinearity this therefore suggests that the model was good enough in the absence of moderator (see Table 4.19).

**Table 4.20: Correlation Analysis of Independent Variable with Moderator Policy Framework**

		Board size	Chief Executive Officer (CEO) duality	Accountability Structures	Resource allocation
Board size	Pearson Correlation	1	.499**	.695**	.414**
	Sig. (2-tailed)		.000	.000	.000
	N	286	286	286	286
CEO Duality	Pearson Correlation	.499**	1	.440**	.878**
	Sig. (2-tailed)	.000		.000	.000
	N	286	286	286	286
Accountability Structures	Pearson Correlation	.695**	.440**	1	.436**
	Sig. (2-tailed)	.000	.000		.000
	N	286	286	286	286
Resource allocation	Pearson Correlation	.414**	.878**	.436**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	286	286	286	286

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### 4.8.7 Multicollinearity

Multicollinearity or excessive correlation among explanatory variables preventing identification of an optimal set of variables and this can be measured using Variance Inflation factor (VIF). A VIF of more than 10 ( $VIF \geq 10$ ) indicate a problem of multicollinearity Okelo, Namusonge and Iravo (2015). Multicollinearity in the study was tested using Variance Inflation Factor (VIF). According to Montgomery (2001) the cut off threshold of 10 and above indicate the existence of multicollinearity while tolerance statistic values below 0.1 indicate a serious problem while those below 0.2 indicate a potential problem. The results in Table 4.21 indicate that the VIF value for Board size was established to be 1.892 while its tolerance statistic was reported to be 0.528, Chief Executive Officer (CEO) duality was established to be 2.309 while its tolerance statistic was reported to be 0.433, the VIF value for Accountability Structures was established to be 2.772 while its tolerance statistic was reported to be



0.361, and lastly the VIF value Resource allocation was established to be 2.161 while its tolerance statistic was reported to be 0.463. Based on these the assumption of no multicollinearity between predictor variables was thus not rejected as the reported VIF and tolerance statistics were within the accepted range.

**Table 4.21: Multi Collinearity Tests**

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Board size	.528	1.892
Chief Executive Officer (CEO) duality	.433	2.309
Accountability Structures	.361	2.772
Resource allocation	.463	2.161

#### **4.9 Test for Autocorrelation (independent of errors)**

The assumption is that for any observations the residual terms should be uncorrelated (independent). This assumption was tested using the Durbin-Watson test which tests for serial correlations between errors. It tests whether the adjacent residuals are correlated. A value of 2 means the residuals are uncorrelated, a value greater than 2 indicates a negative correlation among adjacent residuals, whereas a value below two indicates a positive correlation (Field, 2009). However, Durbin-Watson statistical values less than 1 or greater than 3 are definitely cause for concern. In this study the Durbin-Watson statistical values were 1.976 and 1.976 without moderator (model 1) and with moderator (model 2) respectively Table 4.22. The findings suggest that the residual terms were independent.

**Table 4.22: Overall Model Summary**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	.901 <sup>a</sup>	.811	.806	.30247	1.976
2	.954 <sup>a</sup>	.910	.908	7.08162	1.974

Predictors: (Constant), X<sub>4</sub>X<sub>3</sub>, X<sub>1</sub>, X<sub>2</sub> model 1 and model 2  
b. Dependent Variable: Health Care Service Delivery ( Y)

#### 4.10 Heteroscedasticity and homoscedasticity

Heteroscedasticity in a study normally occurs when the variance of the errors varies across observation, Long and Ervin, (2000). Breusch-Pagan was used to test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables. Breusch-Pagan tests the null hypothesis that heteroscedasticity is not present which imply that Homoscedasticity is present. If P-value is less than 0.05, then reject the null hypothesis. A large chi-square value greater than 9.22 would indicate the presence of heteroscedasticity. In this study, the chi-square a value resulting from each regression where every independent variable is considered individually were: - 6.45245, 3.485941, 2.731245, 3.995876, 4.452674 indicating that heteroscedasticity was not a concern. The null hypothesis tested was that variance is Constant versus the alternative that variation was not constant. The Variables were: Board size, Chief Executive Officer (CEO) duality, Accountability Structures and Resource allocation Table 4.23 shows the rest of the finding.

**Table 4.23: Breusch-Pagan for Heteroscedasticity**

Ho	Variables	Chi2(1)	Prob > Chi2
Constant Variance	Board size	4.452674	0.016424
Constant Variance	Chief Executive Officer (CEO) duality	3.485941	0.021072
Constant Variance	Accountability Structures	2.731245	0.028483
Constant Variance	Resource allocation	3.995876	0.002371

The overall, the chi-square a value resulting from overall regression indicates that heteroscedasticity was absent hence variance was said to be constant as shown in Table 4.24 below.

**Table 4.24: Breusch-Pagan for Heteroscedasticity**

<b>Ho</b>	<b>Variables</b>	<b>Chi2(1)</b>	<b>Prob &gt; Chi2</b>
Constant Variance	Board size , Chief Executive Officer (CEO) duality, Accountability Structures, Resource allocation ,	6.821447	0.026326

#### **4.10.1: Board size Linearity Test**

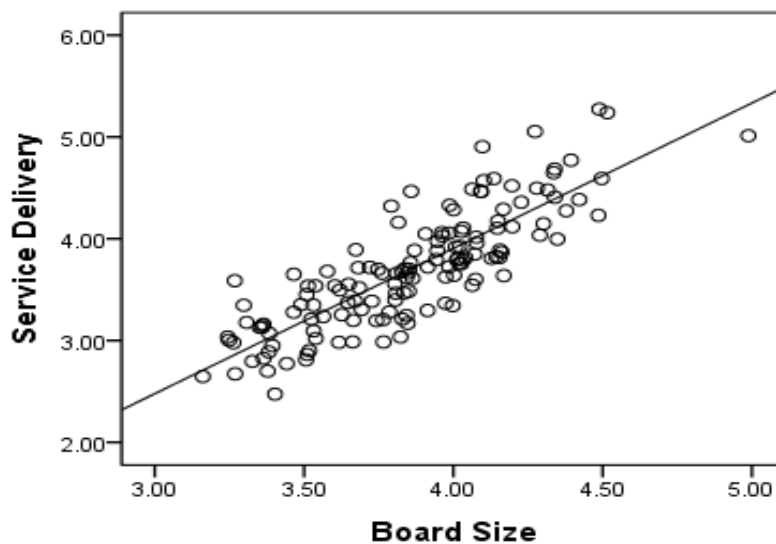
To find out whether there was linear relationship between Board size and Health Care Service Delivery Pearson moment's correlation coefficients was used as suggested by Cohen, West and Aiken, (2003). The result of the finding is presented on Table 4.25. The result indicates that the variables Health Care Service Delivery and Board size had a strong positive relationship indicated by a correlation coefficient value of 0.642<sup>\*\*</sup>. This suggests that there was a linear positive relationship between Board size and Health Care Service Delivery which means that an increase in Board size would lead to a linear increase in Health Care Service Delivery institution of higher learning. This finding is in line with Larmou and Vafeas, (2010) found a positive relationship between board size and performance, suggesting that with larger boards the possibility of strong individuals to control the board can be reduced. Further, it can be established that a large Board of Directors can play a positive role in evaluating management plans and preventing opportunistic behavior. This notion is supported by Lehn et al., (2003) who posited that larger boards of directors can spread the power within the board reducing the potential influence of dominant members who might divert the decisions of the board to their own interest. Hence, large board size may improve the efficiency of decision-making process because of sharing information among members.

**Table 4.25: Board size Correlations Coefficients**

Variable		Health Service Delivery	Care Board size
Health Care Service Delivery	Pearson	1	.642**
	Correlation		
	Sig. (2-tailed)		.000
Board size	N	286	286
	Pearson	.642**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	286	286

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Other than product moment correlation coefficient, linearity was also tested using scatter plot between Health Care Service Delivery and Board size and the result in Figure 4.6 clearly indicates that there was linear relationship between Health care Service Delivery and Board size. From the analysis, it can be concluded that there is no right or wrong board structure but generally shareholders and stakeholders are more inclined towards separation of the roles to promote independence and transparency.



**Figure 4.6: Scatter plot between Health Care Service Delivery and Board size**

#### 4.10.2 Regression Analysis for Board size and Health Care Service Delivery

The first Objective was to analyze the effects of Board size on Health Care Service Delivery in Kenya in Kenya. The objective was tested using the hypotheses one, which stated that;  $H_0$ : There is no significant relationship between Board size and Health Care Service Delivery in Kenya.  $H_1$ : There is significant relationship between Board size and Health Care Service Delivery in Kenya. The test was conducted using the linear regression model. From the model summary, the strength of the relationship between predictor variable and the response variable is shown using correlation (R) or coefficient of determination R- square. The R-square is an indicator of how well the model fits the data. An R- square value, which is close to 1.0, indicates that the dependent variable entirely depends on the independent variables while a value close to 0 indicates no correlation between the descriptive variables and the dependent variable (Ming'ala, 2002). Table 4.18 shows the regression analysis findings between Health Care Service Delivery and Board size.

**Table 4.26: Regression analysis for Board size and Health Care Service Delivery**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642 <sup>a</sup>	.412	.408	.28651
2	.665 <sup>a</sup>	.442	.438	.51483

a. .Model 1 and 2 Predictors: (Constant), Board size and Board size with moderator effect of Policy Framework X1\*Z

a. Dependent Variable: Health Care Service Delivery

From the Table 4.18, the value of R- square without the moderating variable was 0.412. This implied 41.2% of Health Care Service Delivery was explained by Board size. However, with the moderating variable, Policy Framework, the R- square value

increased to 0.442, (44.2%) which was significant influence of Board size on Health Care Service Delivery increased.

## ANOVA

This finding is illustrated in the Analysis of Variance Table 4.19. Where, the p-value was 0.000 which was less than 0.05 in absence of moderator and in the present of moderator. This. Therefore, implied that there was a significant relationship between Board size and Health Care Service Delivery in Kenya. This means that Board size affects Health Care Service Delivery in Kenya However, in the presence of Policy Framework moderating variable the relationship between Board size and Service Delivery became more significant. This is consistent with a similar study done by Eisenhardt and Schoonhoven (1990) using US companies, and Larmou and Vafeas (2010) that found a positive relationship between board size and performance. In addition, a study of German companies by Bermig and Frick (2010) concluded a significant positive relationship between board size and performance.

**Table 4.27: ANOVA for Board size (X<sub>1</sub>)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.122	1	8.122	98.945	.000 <sup>b</sup>
	Residual	11.574	284	.082		
	Total	19.697	285			
2	Regression	29.575	1	29.575	111.583	.000 <sup>b</sup>
	Residual	37.372	284	.265		
	Total	66.947	285			

a. Dependent Variable: Health Care Service Delivery (Y)

b. Model 1 and 2 Predictors: (Constant), X<sub>1</sub> and X<sub>1</sub>\* EEE

From the coefficient Table 4.20 t- test was also used to test the relationship between the predictor variable Board size and Health Care Service Delivery and there was significance relationship between the two variables with or without moderator with p-value= 0.000 < 0.05 for model 1 and 2. The regression equations between Health Care Service Delivery and Board size for the two models can be expressed as;

$Y=2.752+ 0.523X_1$  and  $Y=18.950+ .009X_1$ . The two models indicated that for every unit Board size values changes by 0.523 for model one and 0.999 for model two. These results were also supported by the descriptive analysis. This finding is consistent with Berger et al., (1997) found a positive correlation between board size and debt ratio which they explained by suggesting that with a large number of directors, the pressure on managers to pursue lower leverage and to increase organisation performance, increases.

**Table 4.28: Coefficients for Board size (X<sub>1</sub>)**

Model		Unstandardized Coefficients		Standardized t	Sig.
		B	Std. Error	Beta	
Model 1	(Constant)	2.752	.197	13.965	.000
	Board size	.523	.053	.642	.000
Model2	(Constant)	-.198	.354	-.560	.576
	Board size *Z	.999	.095	.665	.000

a. Dependent Variable: Health Care Service Delivery

From the aforesaid the null hypothesis is rejected and we accept the alternative hypothesis and conclude that Board size has significant influence on Health Care Service Delivery in Kenya both in the presence of moderator and in the absence of moderator.

#### **4.10.3 Linearity Test for Chief Executive Officer (CEO) duality**

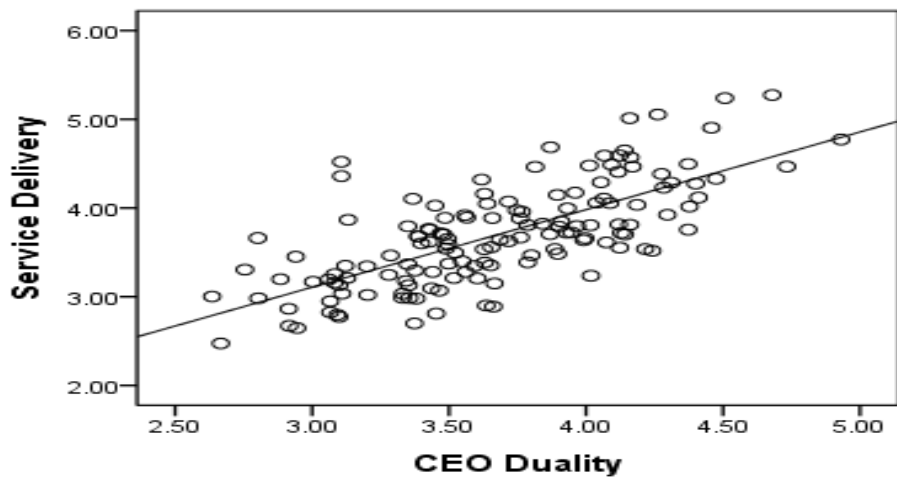
To establish whether there is a linear relationship, the study adopted the Pearson moment's correlation coefficients and the result presented in Table 4.29. The results indicate that the variables Health Care Service Delivery and Chief Executive Officer (CEO) duality had a positive relationship as indicated by a correlation coefficient of 0.723\*\*

**Table 4.29: Board size Correlations Coefficients**

Variable		Health Care Service Delivery	Chief Executive Officer (CEO) duality
Health Care Service Delivery	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	N	286	286
Chief Executive Officer (CEO) duality	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	N	286	286

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Scatter plot between Health Care Service Delivery and Chief Executive Officer (CEO) duality as shown in Figure 4.7 clearly shows that there is linear relationship between Health Care Service Delivery and Chief Executive Officer (CEO)



**Figure 4.7: Scatter plot between Chief Executive Officer (CEO) duality and Health Care Service Delivery**

**4.10.4 Regression Analysis for Chief Executive Officer (CEO) duality and Service Delivery**

The second objective is to establish the effects of Chief Executive Officer (CEO) duality on Health Care Service Delivery in Kenya in Kenya. The objective was



tested using hypotheses that; Ha: There is a significant association between Chief Executive Officer (CEO) duality and Health Care Service Delivery in Kenya in Kenya versus H<sub>0</sub>: There is no association between Chief Executive Officer (CEO) duality and Health Care Service Delivery in Kenya.

#### 4.10.5 Analysis and Discussion

The Pearson's product moment correlation statistic was used to test the relationship between the Chief Executive Officer Duality and Health Care Service Delivery. The R square value without the moderating variable showed that 0.523 (52.3%) of Health Care Service Delivery was explained by Chief Executive Officer (CEO) duality but went slightly up to 0.596 (59.6%) with the moderating variable as shown in Table 4.30 below. This was quite significant at 0.05. These results showed that there was a positive significant effect between Chief Executive Officer (CEO) duality and Health Care Service Delivery in Kenya. This finding is agreement with Page and Spira, (2004) that examined the influence of the Turnbull report recommendations on internal audit departments of the FTSE 350 companies, found positive impact of internal audit on the company.

**Table 4.30: Regression analysis for Chief Executive Officer (CEO) duality (X<sub>2</sub>) and Health Care Service Delivery**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	.723 <sup>a</sup>	.523	.519	.25821	2.050
2	.772 <sup>a</sup>	.596	.593	.43821	1.893

Model 1 and 2 Predictors: (Constant) X<sub>2</sub> and X<sub>2</sub>\*Z

Dependent Variable: Health Care Service Delivery

This finding was further confirmed by the results of Analysis of Variance (ANOVA) as shown in Table 4.31. In both cases that is: with and without the moderating variable the value was 0.000 which is less than 0.05 Statistically it meant there was a significant relationship between Chief Executive Officer (CEO) duality and Health Care Service Delivery.

**Table: 4.31: ANOVA<sup>a</sup> for Chief Executive Officer (CEO) duality (X<sub>2</sub>)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.296	1	10.296	154.424	.000 <sup>b</sup>
	Residual	9.401	284	.067		
	Total	19.697	285			
2	Regression	39.871	1	39.871	207.632	.000 <sup>b</sup>
	Residual	27.076	284	.192		
	Total	66.947	285			

a. Dependent Variable: Health Care Service Delivery

b. Model 1 and 2 Predictors: (Constant), X<sub>2</sub>

**Coefficient: Chief Executive Officer (CEO) duality (X<sub>2</sub>)**

Further, the regression coefficient without moderating variable showed a p- value of 0.000, which is less than 0.05, significance level. The value was the same with the moderating variable, effect of Policy Framework. The model generated from the coefficient Table was as follows.  $Y=2.365+ 0.592X_2$  without moderator and  $Y=-1.076+ 1.165X_2$  with moderator. See Table 4.32 below.

**Table 4.32: Coefficients for Chief Executive Officer (CEO) duality**

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.	Collinearity Statistics	
		B	Std. Error	Beta		Tolerance	VIF
1	constant	2.365	.189		12.518.000		
	(CEO) duality	.592	.048	.723	12.427.000	1.000	1.000
2	constant	-1.076	.321		-3.355 .001		
	(CEO) duality	1.165	.081	.772	14.409.000	1.000	1.000

a. Dependent Variable: Health Care Service Delivery (Y)

From the findings, there was significant relationship between Chief Executive Officer (CEO) duality and Health Care Service Delivery, hence the null hypothesis was rejected and the alternative adopted that there is significant statistical effect of

Chief Executive Officer (CEO) duality on Health Care Service Delivery. This study finding is consistent with a similar study done in Jordan organizations (Tomor & Bino, 2007) that found that the organizations performed better if the chair and the CEO role are combined.

#### 4.11 Linearity Test for Accountability Structures

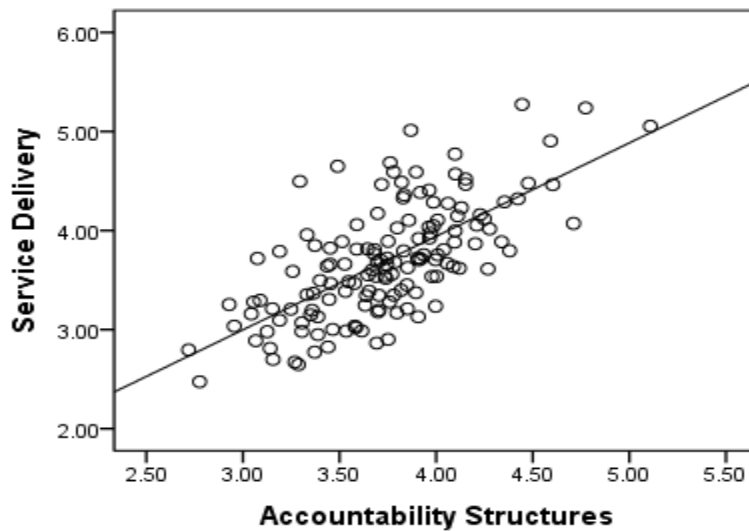
Linearity of variables was tested using correlation coefficients as suggested by Cohen, West and Aiken, (2003). To establish whether there is a linear relationship, the study adopted the Pearson moment's correlation coefficients and the result presented in Table 4.33. The results indicate that the variables Health Care Service Delivery and Accountability Structures had a strong positive relationship as indicated by a correlation coefficient of 0.723\*\*.

**Table 4.33: Accountability Structures Correlations Coefficients**

		Health Service Delivery	Care Accountability Structures
	Pearson Correlation	1	0.723**
Health Care Service Delivery	Sig. (2-tailed)		0.000
	N	286	286
	Pearson Correlation	.723**	1
Accountability Structures	Sig. (2-tailed)	.000	
	N	286	286

\*\* Correlation is significant at the 0.01 level (2-tailed).

Scatter plot between Health Care Service Delivery and Accountability Structures shown in Figure 4.8 Shows clearly that there was linear relationship between Health Care Service Delivery and Accountability Structures



**Figure 4.8: Accountability Structures Correlations Coefficients**

#### **4.11.2 Regression Analysis for Accountability Structures**

To establish the third objective a simple regression analysis was conducted to establish the relationship between the Accountability Structures and Health Care Service Delivery in Kenya in Kenya. The hypothesis tested was; **H<sub>0</sub>**: There is no significant relationship between Accountability Structures and Health Care Service Delivery in Kenya against **H<sub>1</sub>**: There is significant relationship between Accountability Structures and Health Care Service Delivery in Kenya. To test the hypotheses linear regression model was used as shown in Table 4.24. The coefficient determinant, R- square without the moderating valuable was 0.522 and 0.607 with the moderating variable. This therefore implies Accountability Structures explained at least 52.2 % of variability of Health Care Service Delivery without moderating variable and 60.7% when there was a moderating variable which was quite significant. This finding is consistent with a similar study done by Manin, Przeworski & Stokes (1999) who posted that found that accountability and policies that are positively related to health care service delivery. According to the Auditor General’s report of 2016, over 10 billion cannot be accounted for by the county governments due to lack of corporate governance framework. Accountability

structures are extremely critical to improving health care service delivery in county governments.

**Table 4.34: Regression Analysis for Accountability Structures (X<sub>3</sub>) and Health Care Service Delivery**

Model R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.723 <sup>a</sup>	.522	.519	.25832
2	.779 <sup>a</sup>	.607	.604	.43191

a. Model 1 and 2 Predictors: (Constant), X<sub>3</sub> and X<sub>3</sub>

Dependent variable: Health Care Service Delivery (Y)

#### **ANOVA: Accountability Structures**

Analysis of Variance results for regression coefficients revealed that the F-statistic 154.167 without moderator and 217.882 with moderator showing that the two models were significant with p-values being 0.000 which is less than 0.05. Hence, the null hypothesis. The Table 4.35 presented in below indicates the results. This implies that that there was a significant positive relationship between Accountability Structures and Health Care Service Delivery in Kenya.

**Table 4.35. ANOVA for Accountability Structures (X<sub>3</sub>)**

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	10.288	1	10.288	154.167	.000 <sup>b</sup>
	Residual	9.409	284	.067		
	Total	19.697	285			
2	Regression	40.644	1	40.644	217.882	.000 <sup>b</sup>
	Residual	26.302	284	.187		
	Total	66.947	285			

a. Dependent Variable: Health Care Service Delivery (Y)

b. Model 1 and 2 Predictors: (Constant), X<sub>3</sub>

### 4.11.3 Coefficient

The coefficient regression equation between Accountability Structures and Health Care Service Delivery can be expressed as;  $Y = \beta_0 + \beta_1 X_3 + e$  which results to  $Y = 2.76 + 0.516X_3$  when there is no moderator and  $Y = -3.338 + 1.026X_3 + e$  with moderator from the coefficient Table 4.36. The p values with and without the moderating variable (Policy Framework) are 0.000 which were less than 0.05. This further implies that there was a positive significant relationship between Accountability Structures and Health Care Service Delivery in Kenya.

**Table 4.36: Coefficient for Accountability Structures of (X<sub>3</sub>)**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	Sig.	Collinearity Statistics	
	B	Std. Error			Tolerance	VIF
1	(Constant)	2.760	.158		17.514	.000
1	Accountability Structures	.516	.042	.723	12.416	.000
2	(Constant)	-.338	.263		-1.282	.202
2	Accountability Structures *Z	1.026	.070	.779	14.761	.000

a. Dependent Variable: Health Care Service Delivery ( Y )

From the analysis it was therefore, concluded that the third null hypothesis be rejected, and the alternative be accepted since the finding shows that there is a significant relationship between Accountability Structures and Health Care Service Delivery in Kenya. The finding is consistent with those of Finegold, Benson and Hecht (2007) who postulated that CEO duality is positively related with firm performance.

#### 4.11.4 Resource allocation Linearity Test

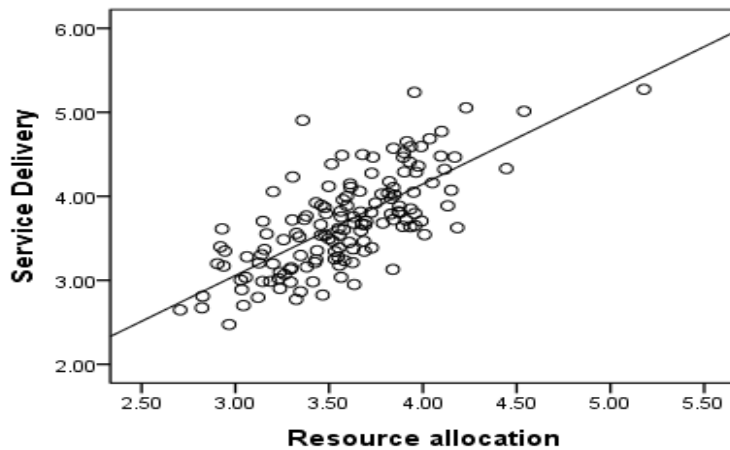
Linearity of variables was tested using correlation coefficients as suggested by Cohen, West and Aiken, (2003). The study adopted the Pearson moment's correlation coefficients, which are presented in Table 4.33. The results indicate that the variables Health Care Service Delivery and Resource allocation had a strong positive relationship as showed by a correlation coefficient of 0.634. Thus, an increase in Resource allocation would result in a linear increase in Health Care Service Delivery. This finding is consistent with a report from Council of Governors that posit an increase in resource allocation leads to better health care service delivery in county governments.

**Table 4.37 : Resource allocation Correlations Coefficients**

		Health Care Service Delivery	Resource allocation
	Pearson Correlation	1	.634**
Health Care Service Delivery	Sig. (2-tailed)		.000
	N	286	286
	Pearson Correlation	.634**	1
	Sig. (2-tailed)	.000	
Resource allocation	N	286	286

\*\* Correlation is significant at the 0.01 level (2-tailed).

Scatter plot between Health Care Service Delivery and Resource allocation as shown in Figure 4.9 shows clearly that there was linear relationship between Health Care Service Delivery and Resource allocation.



**Figure 4.9: Resource allocation Correlations Coefficients**

**4.11.5 Resource allocation Regression Analysis**

Regression analysis was conducted to establish the relationship between the Resource allocation and Health Care Service Delivery in the presence of moderator and in the absence of moderator. From the finding an R- square value of .402 was recorded indicating that 40.2% of Health Care Service Delivery was explained by the n Resource allocation without moderator. On the other hand, R- square value of .673 was recorded indicating that 67.3% of Health Care Service Delivery was explained by the Resource allocation with moderator the model summary Table 4.36 shows the finding. This study finding is consistent with a similar report by the Controller of Budgets which suggested that resource allocation play an important role in devolved units. Further, a report by the Commission of Revenue Allocation suggested that resource allocation improved health care service delivery in counties. (CRA, 2016)

**Table 4.38: Model Summary for Resource allocation**

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.634 <sup>a</sup>	.402	.398	.28904	2.054
2	.820 <sup>a</sup>	.673	.670	.39417	2.052

a. Model 1 and 2 Predictors: (Constant), X<sub>4</sub> and X<sub>4</sub>\*Z



The F-statistics presented in Table 4.37 indicated that the overall model with and without moderator was significant, that is, the independent variable, Resource allocation was a good joint explanatory for Health Care Service Delivery with F-value of 94.770 and 289.881 model 1 and model 2 respectively. P- Values were  $0.000 < 0.05$  also indicates that the models are fit.

**Table 4.39: ANOVA. Resource Allocation**

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	7.917	1	7.917	94.770	.000 <sup>b</sup>
	Residual	11.779	284	.084		
	Total	19.697	285			
2	Regression	45.039	1	45.039	289.881	.000 <sup>b</sup>
	Residual	21.907	284	.155		
	Total	66.947	285			

a. Dependent Variable: Health Care Service Delivery (Y)

b. Model 1 and 2 Predictors: (Constant), X<sub>4</sub>

The coefficient regression equation between Resource allocation and Health Care Service Delivery can be expressed as;  $Y = \beta_0 + \beta_1 X_3$  which results to

$Y = 3.1 + 0.408X_4$  when there is no moderator and  $Y = -0.297 + 0.973X_4 * Z$  with moderator from the coefficient Table 4.40. The p values with and without the moderating variable (Policy Framework) are 0.000 which were less than 0.05. This further implies that there was a positive significant relationship between Resource allocation and Health Care Service Delivery in Kenya.

**Table 4.40: Regression Coefficients- Resource allocation**

Model		Unstandardized Coefficients		Standardizedt	Sig.	Collinearity Statistics	
		B	Std. Error	Beta		Tolerance	VIF
1	(Constant)	3.100	.166		18.679	.000	
	Resource allocation	.408	.042	.634	9.735	.000	1.000 1.000
2	(Constant)	-.297	.226		-1.314	.191	
	Resource allocation*Z	.973	.057	.820	17.026	.000	1.000 1.000

a. Dependent Variable: Health Service Delivery ( Y)

Therefore, the overall model for the study was;  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$  where:

Y = Health Care Service Delivery

X<sub>1</sub> = Board size

X<sub>2</sub> = Chief Executive Officer (CEO) duality

X<sub>3</sub> = Accountability Structures:

X<sub>4</sub> = Resource allocation

Z = Policy Framework

Table 4.11 shows the analysis of the suitability of the model used in the study. The results indicated that the overall model was satisfactory as it was supported by coefficient of determination also known as the R-square of 0.646. This means that all the independent variables explain 64.6% of the variations in the dependent variable. In addition to that, the model improved in the presence of moderator as the overall R- square increased from 0.646 to 0.811 that is 64.6% to 81.1%

**Table 4.41: Overall Model Fitness**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	.804 <sup>a</sup>	.646	.636	.22480	2.027
2	.901 <sup>a</sup>	.811	.806	.30247	1.976

a. Predictors: (Constant), Resource allocation, Chief Executive Officer (CEO) duality, Accountability Structures, Board size:

b. Dependent Variable: Health Care Service Delivery

Table 4.42 provides results on the analysis of the variance (ANOVA). The results shows that the overall model was statistically significant. This was supported by an F statistic of 62.938 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level. Also for model 2 where the moderator is present the model was still significant as the F statistic value was 148.439 with p-value  $0.000 < 0.05$ . These results suggest that the independent variables are good predictors of Health Care Service Delivery in both absence and present of moderator.

**Table 4.42: Analysis of Variance (ANOVA) with moderator and without moderator**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.723	4	3.181	62.938	.000 <sup>b</sup>
	Residual	6.974	281	.051		
	Total	19.697	285			
2	Regression	54.321	4	13.580	148.439	.000 <sup>b</sup>
	Residual	12.625	281	.091		
	Total	66.947	285			

a. Dependent Variable: Health Care Service Delivery

b. Predictors: (Constant), Resource allocation, Chief Executive Officer (CEO) duality, Accountability Structures, Board size.

Regression of coefficients results in Table 4.11.3 indicates that there is a positive and significant relationship between Health Care Service Delivery (dependent variable) and Chief Executive Officer (CEO) duality, Accountability Structures, Accountability Structures and Resource allocation (explanatory variables). From the finding, the overall model obtained was expressed as:  $Y = 1.965 + 0.166X_1 + 0.277X_2 + 0.194X_3 + 0.074X_4$ . These were supported by beta coefficients of 0.166, 0.277, 0.194 and 0.074 respectively. This result shows that a change in either of the variables definitely lead to a positive change in health care service delivery in Kenya. Besides that, in the presence of moderator the model was expressed as:  $Y = 1.871 + 0.232X_1Z + 0.380X_2Z + 0.274X_3Z + 0.509X_4Z$  and the coefficients of 0.232,

0.380, 0.274 and 0.509 respectively. This result shows that a change in either of the variables definitely lead to a positive change in health care service delivery in Kenya.

**Table 4.43: Overall Model Coefficients for MMR Model**

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	Collinearity Statistics		
	B	Std. Error	Beta		Tolerance	VIF	
Model 1 (Constant)	1.965	.180		10.919	.000		
X <sub>1</sub>	.166	.057	.204	2.930	.004	.528	1.892
X <sub>2</sub>	.277	.063	.339	4.400	.000	.433	2.309
X <sub>3</sub>	.194	.060	.272	3.226	.002	.361	2.772
X <sub>4</sub>	.074	.048	.116	1.554	.022	.463	2.161
Model 2 (Constant)	-1.871	.242		-7.724	.000		
X <sub>1</sub> Z	.232	.076	.154	3.035	.003	.528	1.892
X <sub>2</sub> Z	.380	.085	.252	4.482	.000	.433	2.309
X <sub>3</sub> Z	.274	.081	.208	3.385	.001	.361	2.772
X <sub>4</sub> Z	.509	.064	.429	7.902	.000	.463	2.161

In addition to that, the hypotheses: -

**H<sub>01</sub>:** There is no significant relationship between Board size and Health Care Service delivery in Kenya that is (**H<sub>0</sub>:  $\beta_1 = 0$**  vs **H<sub>1</sub>:  $\beta_1 \neq 0$** )

**H<sub>02</sub>:** There is no significant relationship between Chief Executive Officer (CEO) duality and Health Care Service Delivery in Kenya (**H<sub>0</sub>:  $\beta_2 = 0$**  vs **H<sub>1</sub>:  $\beta_2 \neq 0$** )

**H<sub>03</sub>:** There is no significant relationship between Accountability Structures and Health Care Service Delivery in Kenya. (**H<sub>0</sub>:  $\beta_3 = 0$**  vs **H<sub>1</sub>:  $\beta_3 \neq 0$** )

**H<sub>04</sub>:** There is no significant relationship between Resource allocation and Health Care Service Delivery in Kenya (**H<sub>0</sub>:  $\beta_4 = 0$**  vs **H<sub>1</sub>:  $\beta_4 \neq 0$** )

**H<sub>05</sub>:** There is no moderating effect of Policy framework and Health Care service delivery in Kenya (**H<sub>0</sub>:**  $\beta_4 = 0$  vs **H<sub>1</sub>:**  $\beta_4 \neq 0$ )

The Table 4.44 below show the summary of the hypotheses rejected.

**Table 4.44: Overall Model Coefficients without moderator**

Hypotheses	t- value	Sig value	Decision
H <sub>0</sub> : $\beta_1 = 0$	2.930	.004	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_1 \neq 0$			
H <sub>0</sub> : $\beta_2 = 0$	4.400	.000	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_2 \neq 0$			
H <sub>0</sub> : $\beta_3 = 0$	3.226	.002	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_3 \neq 0$			
H <sub>0</sub> : $\beta_4 = 0$	1.554	.022	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_4 \neq 0$			

The Table 4.45 below show the summary of the hypotheses with moderator.

**Table 4.45 Overall Regression Coefficients with moderator**

Hypotheses	t- value	Sig value	Decision
H <sub>0</sub> : $\beta_1 = 0$	3.035	.003	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_1 \neq 0$			
H <sub>0</sub> : $\beta_2 = 0$	4.482	.000	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_2 \neq 0$			
H <sub>0</sub> : $\beta_3 = 0$	3.385	.001	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_3 \neq 0$			
H <sub>0</sub> : $\beta_4 = 0$	7.902	.000	Reject H <sub>0</sub>
H <sub>1</sub> : $\beta_4 \neq 0$			

#### 4.12 Optimal Model

Based on the tests conducted in this study it was concluded that the independent variables (Board size, Chief Executive Officer Duality, Accountability Structures Resource allocation) had influence on the dependent variable (Health Care Service Delivery in Kenya). The moderating variable (Policy Framework) was found to have a moderating effect on the relationship between independent variables and dependent variable since it raises the influence of Board size, Chief Executive Officer (CEO) duality, Accountability Structures and Resource allocation on Health Care Service Delivery in Kenya. Moreover, by comparing the overall regression model 1 (without moderator) with overall regression model 2 (with moderator) in Table 4.32 it was clear that R squared value for model 1 was less than R squared value for model 2 that is  $R_1^2 < R_2^2 = 0.629 < 0.741$  meaning that policy framework had a moderating effect on the overall model. Consequently, based on the research findings the proposed study model was retained as the optimal model.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary, conclusions and recommendation for further research as guided by the specific objectives. Five specific objectives were set for the study out of which ten hypotheses were formulated.

#### 5.2 Summary

This section summarizes key findings of the study on the basis of the study objectives. The main objective of the study was to examine effect of corporate governance on health care service delivery in county governments in Kenya. Specifically, the study examined the relationship between board size, CEO duality, accountability structures, allocation of resources, policy framework and health care service delivery. The study also sought to establish the policy framework as moderating role of health care service delivery.

##### 5.2.1 The Effect of Board size on Health Care Service Delivery in County Governments in Kenya

The first objective of the study was to establish whether board size influences health care service delivery in county governments in Kenya. From this objective, it was hypothesized that there is no relationship between board size and health care service delivery in county governments in Kenya. The results of this study showed a positive statistically significant relationship between board size and health care service delivery in county governments in Kenya. Therefore, hypothesis **H01**: there is no significant relationship between board size and health care service delivery in county governments in Kenya was rejected and concluded that board size has a significant effect on health care service delivery. The findings therefore confirmed that board size is a determinant of health care service delivery in county governments in Kenya.

### **5.2.2 The Effect of Chief Executive Duality on Health Care Service Delivery in County Governments in Kenya**

The second objective was to examine the relationship of CEO duality on service delivery in county governments in Kenya. It had been hypothesized that CEO duality is not related to health care service delivery in county governments in Kenya. The findings revealed that there is a positive statistically significant relationship between CEO duality board composition and health care service delivery in county governments in Kenya. Therefore, hypothesis **H02**: CEO duality is not related to service delivery in county governments in Kenya was rejected and concluded that CEO duality has a significant effect on health care service delivery. The findings therefore confirmed that CEO duality is a determinant of service delivery in county governments in Kenya. The findings are in conflict with The Health Act 2016-part IV section 29 which stipulates that, the chairperson for CHMT shall be members of a medical board.

### **5.2.3 The Effect of Accountability structures on Health Care Service Delivery in County Governments in Kenya**

The third objective of the study was to examine the effect of accountability structures on health care service delivery in county governments in Kenya. It had been hypothesized that there is no relationship between accountability structures and health care service delivery in county governments in Kenya. The study revealed that there is a positive statistically significant relationship between accountability structures and health care service delivery in county governments in Kenya. Therefore, hypothesis **H03**: there is no significant relationship between accountability structures and health care service delivery in county governments in Kenya is rejected and concluded that accountability structures had a significant effect on health care service delivery.



#### **5.2.4 The Effect of Allocation of Resources on Health Care Service Delivery in County Governments in Kenya**

The fourth objective of the study was to evaluate the effect of allocation of resources on health care service delivery in county governments in Kenya. It had been hypothesized that allocation of resources is not related to health care service delivery in county governments in Kenya. The results confirmed that there is a positive statistically significant association between allocation of resources and health care service delivery in county governments in Kenya. The results reveal that allocation of resources is statistically significant in explaining health care service delivery of county governments in Kenya. Therefore, hypothesis **H04**: allocation of resources is not related to health care service delivery in county governments in Kenya is rejected and concluded that allocation of resources had a significant effect on health care service delivery. The findings led to a conclusion that allocation of resources plays a vital role in the health care service delivery of county governments in Kenya.

#### **5.2.5 The Moderating Effect of policy framework on the relationship between corporate Governance and Health Care Service Delivery**

The fifth study objective of the study was to determine the moderating effect of policy framework on the relationship between corporate governance and health care service delivery in county governments in Kenya. It was hypothesized that there is no moderating effect of policy framework on the relationship between corporate governance and health care service delivery in county governments in Kenya. Consequently, the rejected the null hypothesis **H05**: that policy framework had no significant moderating effect on the relationship between corporate governance and health care service delivery of county governments in Kenya. The study concluded that policy framework does moderate the relationship between corporate governance and health care service delivery. The study also tested the role of moderating variable on the relationship between each predictor variable and health care service delivery under objective six. From the finding, the policy framework on moderating

variable increased from 0.629 to 0.741 meaning that policy framework had a moderating effect on the overall model. The result indicate that the moderating effect has an effect on health service delivery in Kenya.

### **5.3 Conclusions**

The following conclusions can be made arising from the findings of this study.

#### **5.3.1 Board size and Health Care Service Delivery**

The findings reveal that there is a statistically significant effect of Board size on health care service delivery in county governments in Kenya. A positive increase in board size leads to an increase in health care service delivery in county governments in Kenya. It can be concluded from this study that board size was statistically significant in explaining service delivery in county governments in Kenya. These results are in line with those of Dalton and Dalton, (2005) who concluded that larger boards are correlated with higher organization performance. Additionally, Adam & Mehran, (2005) found a positive relationship between board size and performance in the U.S banking industry.

#### **5.3.2 Chief Executive Duality and Health Care Service Delivery**

The study concluded that there exists a positive significant relationship between CEO Duality and health care service delivery in county governments in Kenya. The results reveal that CEO duality is statistically significant in explaining health care service delivery in county governments in Kenya. These findings agree with Brickley, Coles & Jarrell (1997) that asserted that monitoring costs arise when the CEO and chairman are separated.

#### **5.3.3 Accountability structures and Health Care Service Delivery**

The study concluded that there exists a positive significant relationship between accountability structures and health care service delivery in county governments in

Kenya. The results reveal that accountability structures are statistically significant in explaining health care service delivery in county governments in Kenya. These findings corroborate with those in literature by of Van Kersbergen & Van Waarden (2004), Chhotray & Stoker, (2008) who concluded that accountability structures is a key levers for successful performance improvement. Furthermore, Baez-Camargo, (2011) concluded that by ensuring that the resources necessary to perform are available the overall accountability in the system can be strengthened and improved. The findings led to a conclusion that accountability structures were a key driver of health care service delivery of county governments in Kenya. This notion is supported by the Auditor General's report released in 2017 that established that accountability structures key in improving health care service delivery.

#### **5.3.4 Allocation of resources and Health Care Service Delivery**

The findings confirm that there is a statistically significant influence of allocation of resources on health care service delivery in county governments in Kenya. It was possible to infer that the relationship between allocation of resources and health care service delivery is positive and significant. The study concluded that allocation of resources was statistically significant in explaining health care service delivery in county governments in Kenya. It was also concluded that allocation of resources is being adequately practiced in county governments in Kenya. This indicated that county government officials were optimistic about allocation of resources and how it had impacted on the operations of the county governments in Kenya. The findings are supported by (Bosset et al., 2003) who concluded that resource allocation in Colombia and Chile can improve health care service delivery.

#### **5.3.5 Moderating Effect of policy framework on corporate Governance and Health Care Service Delivery**

The study concluded that policy framework does have a moderating effect on the relationship between corporate governance and health care service delivery in county government. The study also concluded that policy framework has a significant

moderating effect on the relationship between board size, CEO duality, accountability structures, allocation of resources and health care service delivery in county governments in Kenya.

#### **5.4 Recommendations**

From the finding of the study, it came out clear that all corporate governance dimensions had a significant positive effect on health care service delivery in county governments in Kenya. Specifically, the study found that board size has a positive statically significant relationship on health care service delivery in county governments in Kenya. The study recommends both National and county should put in place a set of deliberate and proactive processes, policies and structures that supports board size in order to improve health care service delivery. The National government should review existing policy on allocation of resources and timely release of funds to ensure smooth health care service delivery. Additionally, the study recommends that the National government should Review the roles of bodies such as hospital management boards and facility management committees. Further, the study recommends that National government should appreciate the strategic philosophy of corporate governance by restraining their line ministries from interfering in the management of all devolved health care services. The study confirmed that CEO duality influences health care service delivery in county governments in Kenya. It has been established that there exists a positive significant relationship between CEO duality and health care service delivery in county governments in Kenya. The study thus recommends that National and county governments should put in place measures to strengthen CEO duality for CHMT. The study further recommends that the members of County Health Management Committees should use the finding of this study to better align or revise the existing county legal framework, to promote health care service delivery in the counties. This study also recommends that National government enhance operationalization of the CHMT's training manuals and procedures in order to promote health care service delivery to all county government. Further, the National and county Government

should enact laws on to serve as control mechanism in order to enhance corporate governance.

The study also established that allocation of resources leads to improved health care service delivery. The study thus recommends that county governments should be given the resources without delay to ensure that smooth health care service delivery. Additionally, the study also recommends that the county governments should continue to involve the stakeholders' participation in its operation to ensure quality health care service delivery to their customers. The findings also confirmed that there is a moderating effect of policy framework on the relationship between corporate governance and health care service delivery in county governments in Kenya. The study recommends that the National government should continuously develop the policy guidelines and share them with the counties. The study also recommends use of technological framework to enhance efficient health care service delivery.

#### **5.4.1 Policy implications**

The study found that all the five corporate governance dimensions had a significant positive effect on health care service delivery in county governments in Kenya. The policy implications are highly relevant: board size, CEO duality, accountability structures, allocation of resources may render more positive impact in terms of improved health care services delivery. Further, the effect of board size, CEO duality, accountability structures, allocation of resources are highly relevant for policy makers in developing countries. The study thus is expected to assist policy makers in coming up with policies geared towards improving health care service delivery. This finding also supports the COK recommendations that stipulates taking health care services to the lowest units.

The study recommended that, County governance should embrace good resource allocation practices across their counties as a rule, and, as envisaged in the Kenyan Constitution 2010. In addition, the Public Finance Management Act 18 of 2012

outlines that for the realization of sustainable economic growth good governance must be embraced by all counties.

#### **5.4.2 Theoretical Implications**

In the course of analyzing the research findings some unexpected issue emerged that has implications for the wider body of knowledge. After scrutinizing the Kenyan corporate governance literature there was scanty of evidence that link governance and health care service delivery. This gap in literature suggests that the research has made a significant contribution to the body of knowledge. The study will assist intellectuals and be a reference for future studies and practitioners' undertakings on link of corporate governance variables and health care service delivery. The findings of the study added to the theoretical literature on the corporate governance and health care service delivery as the study proposed optimal model of the relationship between corporate governance and health care service delivery. This study has made useful contribution to the advancement of academic knowledge on governance from the context of Sub-Saharan African setting and particularly to county governments in Kenya.

#### **5.5 Suggestion for Further Research**

While the objectives of this study were successfully accomplished, it however suffered several limitations which may require to be addressed by future research. The findings have contributed to the existing stock of knowledge in the literature of corporate governance and health care service delivery in county governments in a developing country. However, additional research is required particularly on the issue of examining the moderating role of variables such as citizen participation, demographic characteristics, socio- economic factors, experience, qualification, age, religion, sex and others on the relationship between governance and health care service delivery in county governments. The present study therefore recommends future researchers to examine the relationship between corporate governance and health care service delivery through mediator variables.

This study restricted itself to four governance variables (board size, CEO duality, accountability structures and allocation of resources) which were not exhaustive in investigating the effect of corporate governance on health care service delivery. Further empirical work could be conducted to expose other corporate governance variables such as voice and accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption, which may influence health care service delivery in county governments in Kenya. In addition, this study examined the link between corporate governance and health care service delivery based on data from a single country. While this approach has the advantage of presenting a more focused and detailed view, it does not help to provide international comparisons and cross-country empirical evidence. Hence, this study suggests that future authors extend the sampling to other countries and the duration of study from five years to enable international comparisons and cross-country empirical evidence.

Further, since the study applied questionnaire survey, descriptive and explanatory research design, further studies could be carried using additional qualitative or mixed methods to enrich the findings. Future studies should apply different research instruments like focus group discussions to involve respondents in discussions in order to generate detailed information, which would help improve health care service delivery. Moreover, uses cross-sectional surveys, which limits the identification of causality between corporate governance and health care service delivery. Future researchers may undertake longitudinal studies to address this issue more conclusively.

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## **APPENDICIES**

### **Appendix I: Introduction Letter**

Susan W. Kinyeki  
P.O. Box 43592-00100  
Nairobi

#### **TO WHOM IT MAY CONCERN**

**Dear Sir/Madam,**

**RE: REQUEST FOR COLLECTION OF DATA – SUSAN W. KINYEKI  
ID.10366506**

I am a PhD student at Jomo Kenyatta University of Agriculture and Technology (JKUAT). I wish to conduct a research entitled ‘Effects of Corporate Governance on Health Care Service Delivery in Kenya’.

The purpose of this letter is therefore request that you grant permission to collect relevant data from your county from selected respondents among your management staff. The data collected with be treated with utmost confidentiality and will be used for the purposes of this research only. Your cooperation in participating in this study is high appreciated.

Yours Sincerely,

Susan Wambui Kinyeki

## **Appendix II: List of County Government functions**

The functions and powers of the county are--

### **1. Agriculture, including—**

- (a) crop and animal husbandry;
- (b) livestock sale yards;
- (c) county abattoirs;
- (d) plant and animal disease control; and
- (e) fisheries.

### **2. County health service, including, in particular—**

- (a) county health facilities and pharmacies;
- (b) ambulance services;
- (c) promotion of primary health care;
- (d) licensing and control of undertakings that sell food to the public;
- (e) veterinary services (excluding regulation of the profession);
- (f) cemeteries, funeral parlours and crematoria; and
- (g) refuse removal, refuse dumps and solid waste disposal.

### **3. Control of air pollution, noise pollution, other public nuisances and outdoor advertising.**

### **4. Cultural activities, public entertainment and public amenities, including--**

- (a) betting, casinos and other forms of gambling;
- (b) racing;
- (c) liquor licensing;
- (d) cinemas;
- (e) video shows and hiring;
- (f) libraries;
- (g) museums;

(h) sports and cultural activities and facilities; and

(i) county parks, beaches and recreation facilities.

**5. County transport, including--**

(a) county roads;

(b) street lighting;

(c) traffic and parking;

(d) public road transport; and

(e) ferries and harbours, excluding the regulation of international and national shipping and matters related thereto.

**6. Animal control and welfare, including--**

(a) licensing of dogs; and

(b) facilities for the accommodation, care and burial of animals.

**7. Trade development and regulation, including--**

(a) markets;

(b) trade licences (excluding regulation of professions);

(c) fair trading practices;

(d) local tourism; and

(e) cooperative societies.

**8. County planning and development, including—**

(a) statistics;

(b) land survey and mapping;

(c) boundaries and fencing;

(d) housing; and

(e) electricity and gas reticulation and energy regulation.

**9. Pre-primary education, village polytechnics, homecraft centres and childcare facilities.**

**10. Implementation of specific national government policies on natural resources and environmental conservation, including--**

(a) soil and water conservation; and

(b) forestry.

**11. County public works and services, including--**

(a) storm water management systems in built-up areas; and

(b) water and sanitation services.

**12. Firefighting services and disaster management.**

**13. Control of drugs and pornography.**

**14. Ensuring and coordinating the participation of communities and locations in governance at the local level and assisting communities and locations to develop the administrative capacity for the effective exercise of the functions and powers and participation in governance at the local level.**

**Source: Constitution of Kenya, 2010**

### **Appendix III: List of counties in Kenya**

1. Baringo County
2. Bomet County
3. Bungoma County
4. Busia County
5. Elgeyo Marakwet County
6. Embu County
7. Garissa County
8. Homa Bay County
  
9. Isiolo County
10. Kajiado County
11. Kakamega County
12. Kericho County
13. Kiambu County
14. Kilifi County
15. Kirinyaga County
16. Kisii County
17. Kisumu County
18. Kitui County
19. Kwale County
20. Laikipia County
  
21. Lamu County
22. Machakos County
23. Makueni County
24. Mandera County
25. Meru County
26. Migori County

27. Marsabit County
28. Mombasa County
29. Muranga County
  
30. Nairobi County
31. Nakuru County
32. Nandi County
33. Narok County
34. Nyamira County
35. Nyandarua County
36. Nyeri County
37. Samburu County
38. Siaya County
39. Taita Taveta County
  
40. Tana River County
41. Tharaka Nithi County
42. Trans Nzoia County
43. Turkana County
44. Uasin Gishu County
45. Vihiga County
46. Wajir County
47. West Pokot County

**Source:** Constitution of Kenya, 2010

## **Appendix VII: Questionnaire**

### **Instructions**

Kindly answer all the questions honestly and exhaustively. All the information provided will be used strictly for academic purposes and will be treated with utmost confidentiality.

### **Section A: Demographical Information**

Using the rankings below and to the best of your knowledge, please rate your views on the demographics and other specifics within your county.

Name of your county.....

1. What is your gender?

Male [  ]

Female [  ]

2. What is your age group?

Less than 30 years [  ]

Between 30 – 50 years [  ]

More than 50 years [  ]

3. How long have you worked for the County Government?

Less than 1 year [  ]

Between 1 – 3 years [  ]

More than 3 years [  ]

**Section B: Board Size**

What was the board size of your health facility during the following periods? Please tick where appropriate 1-More than 20members, 2-between 1-15, 3-between 1-10, 4-between 1-8, 5. Between1-6,

Year	1	2	3	4	5
2012					
2014					
2016					

How many years have the present board been operational?

1-Over 5 years, 2. Between 4-5 years 3-between 4-3, 3-between 2-3, 4-between 1-2, 5. Between0-1,

Year	1	2	3	4	5
Over 5 years					
4-5 years					
3-4 years					
2-1 year					
Less than 1 year					

Using the scale below, please indicate your level of agreement to the following propositions on corporate governance and health care service delivery in your county. 5 –Strongly Agree; 4 - Agree; 3 - Neutral; 2 –Disagree; 1 –Strongly Disagree

		1	2	3	4	5
1	The governance structure, role and responsibilities of the hospital are clearly defined and well understood by board members.					
2	The board size members are stipulated in the regulations					



3	There is need for professional diversification in decision making					
4	The board prioritises the time spent on both corporate and clinical governance issues					
5	The board have sufficient knowledge of the business to ask probing questions and provide useful advice to management.					
6	The County Health Management minutes are available for scrutiny by the board					
7	Dissension at the board is tolerated and handled appropriately					

What do you consider to be characteristics of an efficient/effective board?

How long have you served in the board?

### Section C: CEO Duality

Using the scale below, please indicate your level of agreement to the following propositions on corporate governance and health care service delivery in your county. 5 –Strongly Agree; 4 - Agree; 3 - Neutral; 2 –Disagree; 1 –Strongly Disagree

		1	2	3	4	5
1	The health County Executive Committee and is also the chairperson of County Health Management Team are the same					
2	Does the internal audit function report to a sufficiently high level of authority to assure that its findings will receive consideration?					

3	Board members are free from any other interest or relationship that could interfere with their duties					
4	The County Health Management Team hold audit meetings regularly and recommendations are fully implemented					
5	The County Health Management Team has operating policies on all matters that might lead to conflict					
6	All County Health Management Team board members are advised of the policy upon becoming members					
7	All members of County Health Management Team sign Conflict of Interest Statement in the county					

Describe actions the County Health Management Team takes to avoid conflict of interest issues for members of the Board of Directors

**Section D: Policy framework**

Using the scale below, please indicate your level of agreement to the following propositions on corporate governance and health care service delivery in your county

5 –Strongly Agree; 4 - Agree; 3 - Neutral; 2 –Disagree; 1 –Strongly Disagree

		1	2	3	4	5
1	The board focuses its attention on long-term significant policy issues rather than short-term administrative matters					

2	The County Health Management Team has customized international and national policies as required					
2	The County Health Management Team has set standards in accordance with the relevant regulatory bodies					
3	The County Health Management Team has enacted policies for the management of the health care service delivery in the county					
4	The County Health Management Team understands policy formulation framework					
5	The County Health Management Team implements programmes in the County Integrated Development Plan					
6	Policies and regulations have been enacted to operationalize health care service delivery					
7	The County Health Management Team works closely with the Ministry of Health					

What health policies have been developed with a particular focus on improving health care service delivery?

.....

How has intergovernmental affected the implementation of the health policy in the county?

.....

**Section E: Accountability structures**

Using the scale below, please indicate your level of agreement to the following propositions on corporate governance and health care service delivery in your county

5 –Strongly Agree; 4 - Agree; 3 - Neutral; 2 –Disagree; 1 –Strongly Disagree

		1	2	3	4	5
1	The board discuss thoroughly the annual budget of the health facility and its implications before approving it					
1	The County Health Management Team provides oversight for the development of accountability structures					
2	The County Health Management Team has enacted policies on how hospital revenue is received and disbursed					
3	The County Health Management Team ensures that responsibility and authority are clearly communicated and understood by all					
4	The County Health Management Team operations are compliant with Public Finance Management Act and other legislation					
5	The County Health Management Team Committee reviews management’s financial plans and budgets and make sure they are aligned with the objectives					
6	The County Health Management is part of the County budget committee					
7	The County Health Management Committee submits quarterly report					

**Section F: Allocation of Resources**

To what extent have budgets for health, been significantly increased over the last five years?

1-Over 25million 2. Between20-15 million, 3-between15-10 million, 4-between 10-5 million, 5. Less than 5million

FY Year		1	2	3	4	5
2013						
2014						
2015						
2016						
2	It is important to involve facility committees who are responsible for budgeting of funds while costing					
3	The County Health Management Team members prepare Annual Work Plans and submit for ratification					
4	The County Health Management Team has a functional vehicle for supervision?					
5	The County Health Management Team Committee reviews management’s financial plans and budgets and makes sure they are aligned with the objectives					
6	The County Health Management Team ensures financial statements fairly and fully reflect the county’s financial status and that necessary internal controls are in place and working					

7	The County Health Management Team Committee has a resources plan and is adhered to by all stakeholders					
8	The County Health Management Committee monitors implementation of projects on a quarterly basis					

In your opinion how would health care service delivery be enhanced by the county government in Kenya?

.....  
 .....

**Thank you for completing this questionnaire. Your participation is very much appreciated.**

## Appendix IV: NACOSTI Letter



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,  
0713 788787, 0735404245  
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When replying please quote

NACOSTI, Upper Kabete  
Off Wajaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/17/49485/20630**

Date: **18<sup>th</sup> December, 2017**

Susan Wambui Kinyeki  
Jomo Kenyatta University of  
Agriculture and Technology  
P.O. Box 62000-00200  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Effect of corporate governance on health service delivery in Kenya,*" I am pleased to inform you that you have been authorized to undertake research in **Bomet, Embu, Kericho, Murang'a, Nyeri and Taita Taveta Counties** for the period ending **18<sup>th</sup> December, 2018.**

You are advised to report to **the County Commissioners, the County Directors of Education and the County Directors of Health Services of the selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

*G.P. Kalerwa*

**GODFREY P. KALERWA MSc., MBA, MKIM  
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioners  
Selected Counties.