

**INTERACTIONS BETWEEN FINANCING STRATEGIES, HOSPITAL
CHARACTERISTICS AND SERVICE QUALITY AMONG
HEALTHCARE PROVIDERS IN KENYA**

By

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DECLARATION

Declaration by Candidate

This Thesis is my original work and has not been presented for examination in any other university nor institution of higher learning.

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DEDICATION

This research thesis is dedicated to my family for their encouragement and much support and to my friends for their great assistance during the study period.

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ABSTRACT

Healthcare service quality is a concern world-over. In Kenya, the deficiency in service quality has often been linked to inadequate financing which has resulted in problems ranging from frequent industrial unrest to lack of supplies. While in search of the right financing approach to improve healthcare services, there is limited knowledge on financing strategies that can relate with service quality. There has been much debate on contribution levels from these different sources with little consensus on the issue. Not much has been done on other factors that could affect service quality indirectly. The purpose of this study was to establish the moderating effect of institutions characteristics on the relationship between healthcare financing strategies and the delivery of quality services in Kenya. The study sought to establish the gap between the expected and the perceived quality of health, the effects of; equity financing strategies on the quality of health care services, debt financing strategies on the quality of healthcare; network financing strategies on the quality of healthcare services and the moderating effect of Hospital characteristics on the relationship between healthcare financing strategies and quality of healthcare services in Kenya. The study was informed by Cosby Theory on quality, Pecking Order Theory and Resource Based View Theory. The study adopted an explanatory survey design with a target population being senior management and the clients drawn from 535 level 4 to 6 hospitals in Kenya. Random sampling was used to select a sample size of 233 respondents. Data was collected using structured questionnaires and was analyzed descriptively and inferentially. The paired sample t-test was performed to determine gap analysis hypothesis. Hypotheses for direct effect were tested using multiple regression model due to its appropriateness in establishing relationship between independent and dependent variables. Moderating hypotheses were tested using process macro model 1 version 3.4 at 0.05 level of significance. Findings from paired sample t-test showed insignificant gap between the perception and expectation of service quality ($t=-1.108$, $p>.05$). More findings revealed that equity ($\beta=.45$, $p<0.05$) and network financing ($\beta=.29$, $p<0.05$) had significant and positive effect on delivery of quality service in hospitals while debt financing had significant and negative effect on delivery of quality service in hospitals ($\beta=-.35$, $p<0.05$), hence, tested hypothesis was rejected. Further, bed capacity showed significant moderating effect on the relationship between equity financing and service quality ($R^2\Delta=.091$, $\beta=.348$, $p<0.05$), debt financing and service quality ($R^2\Delta=.063$, $\beta=.255$, $p<0.05$), network financing and service quality ($R^2\Delta=.072$, $\beta=.313$, $p<0.05$). Similarly, results showed that facility type showed significant moderating effect on the relationship between equity financing and service quality ($R^2\Delta=.11$, $\beta=.35$, $p<0.05$). However, there was no significant moderating effect on relationship between debt financing and network financing on service quality. Thus, the study concludes that equity and network financing enhance delivery of quality service in hospital while debt financing hinders delivery of quality service in hospital. The study recommends that, government owned hospital with high bed capacity increase use of equity and network, financing strategies in order to improve service quality. The study provides unique recommendations towards knowledge on hospital financing in relationship to service quality. In addition, the study has contributed to new knowledge by establishing that bed capacity significantly moderates the relationship between and service quality, while Facility Type only moderates the relationship between equity financing and service quality but not the relationship between debt/network financing and service quality.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGMENTS	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	xi
LIST OF FIGURES	xiii
OPERATIONAL DEFINITION OF TERMS	xiv
ABBREVIATIONS	xvi
CHAPTER ONE	1
INTRODUCTION.....	1
1.0 Overview.....	1
1.1 Background of the Study	1
1.1.1 Service Quality.....	6
1.1.2 Healthcare Financing	12
1.1.3 Hospital Characteristics	18
1.2 Statement of the Problem.....	19
1.3 Objectives of the Study	20
1.4 Hypotheses of the Study	21
1.5 Significance of the Study	22
1.6 Scope of the Study	24
CHAPTER TWO	25
LITERATURE REVIEW	25
2.1 Introduction.....	25
2.2 Concept of Quality Services	25
2.2.1 Quality in Service Industry	26
2.2.2 Healthcare Service Quality	28
2.3 Theoretical Foundation	29
2.3.1 The Crosby’s Theory	29
2.3.2 Capital Structure Theories	30
2.3.2.1 Pecking Order Theory	30
2.3.2.2 Modigliani Miller Theory.....	32

2.3.2.3 The Tradeoff Theory	33
2.3.3 Resource Based View (RBV) Theory.....	34
2.4 Models Guiding the Study.	36
2.4.1 Service Quality Models.....	36
2.4.2 Finance Models	38
2.4.3 Moderation Model	39
2.5 Financing Strategies and Healthcare Services	40
2.5.1 Equity Financing and Service Quality	45
2.5.2 Debt Financing Strategies and Service Quality	73
2.5.3 Network Financing Strategies and Service Quality	79
2.6 Moderation Effect of Hospital characteristics on Service Quality	83
2.7 Knowledge Gap	88
2.8 Conceptual Framework.....	90
CHAPTER THREE	92
RESEARCH METHODOLOGY	92
3.1 Introduction.....	92
3.2 Philosophical Paradigm	92
3.3 Research Design.....	92
3.4 Study Population.....	93
3.5 Sampling Size and Sampling Technique	93
3.6 Sampling Frame	94
3.7 Data Collection	95
3.7.1 Types and Sources of Data	95
3.7.2 Data Collection Instruments	95
3.7.3 Data Collection Procedure	97
3.7.4 Measurement of Variables	97
3.8 Validity and Reliability of the Instruments.....	98
3.8.1 Content Validity.....	98
3.8.2 Predictive Validity	99
3.8.3 Reliability.....	100
3.9 Data Analysis Methods and Modeling.....	100
3.9.1 Data Transformation	101
3.9.2 Exploratory Factor Analysis	101
3.9.3 Pearson's Product Moment Correlation Test.....	102

3.9.4 Hypothesis Testing.....	103
3.9.5 Assumptions of Regression Model	105
3.10 Research Study Findings Dissemination	106
3.11 Limitations of the Study.....	106
3.12 Ethical Consideration.....	107
CHAPTER FOUR.....	109
DATA ANALYSIS, PRESENTATION, AND INTERPRETATION	109
4.1 Introduction.....	109
4.2 Data Screening and Cleaning	109
4.2.1 Examination of Missing Data	110
4.2.2 Treatment of Personal Values Data	110
4.2.3 Management of Data for Subsequent Analysis.....	111
4.2.4 Assessment of Outliers	111
4.2.5 Response Rate	112
4.3 Demographic Information.....	113
4.4 Hospital Age against Financing Strategies and Service Quality	114
4.5 Facility Type against Financing Strategies and Service Quality	116
4.6 Hospital Level against Financing Strategies and Service Quality	118
4.7 Bed Capacity against Financing Strategies and Service Quality	120
4.8 Descriptive Statistics.....	122
4.8.1 Ex-Chequer	122
4.8.2 Out of Pocket	124
4.8.3 Insurance	125
4.8.4 Debt Financing.....	129
4.8.5 Network Financing.....	130
4.8.6 Service Quality.....	132
4.8.6.1 Expected Service Quality	132
4.8.6.2 Perceived Service Quality	133
4.9 Reliability.....	136
4.10 Factor Analysis	137
4.10.1 Independent Variable	138
4.10.2 Dependent Variable	141
4.10.2.1 Expected Service Quality	141
4.10.2.2 Perceived Service Quality	142

4.11 Data Transformation	144
4.12 Regression Assumptions	144
4.12.1 Normality	145
4.12.2 Test for Heteroskedasticity	146
4.12.2.1 Lavene Test	146
4.12.2.2 Test for Homoskedasticity and Heteroskedasticity	147
4.12.3 Linearity	147
4.12.4 Multicollinearity	148
4.12.5 Autocorrelation/Independent of Errors	149
4.13 Correlation Analysis	150
4.14 Regression Model	152
4.14.1 Control Variable and Service Quality	152
4.15 Hypotheses Testing	153
4.15.1 Gap Analysis (Hypothesis 1)	153
4.15.2 Hypothesis Testing (Direct Effect, Hypothesis 2, 3, 4)	154
4.15.3 Testing Moderating Effect of Bed Capacity on the Relationship between Financing Strategies and Service Quality	155
4.15.4 Testing Moderating Effect of Facility Type on the Relationship between financing Strategies and Service Quality	158
4.15.5 Modgraphs	161
4.16 Summary of Hypotheses Testing Results	165
CHAPTER FIVE	167
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS	167
5.0 Introduction	167
5.1 Summary and Discussions of the Findings	167
5.1.1 The Gap between Quality Expectations and Quality Perception	168
5.1.2 Effect of Equity Financing and Service Quality	168
5.1.3 Effect of Debt Financing and Service Quality	170
5.1.4 Effect of Network Financing and Service Quality	171
5.1.5 Effect of Bed Capacity on the Relationship between Financing Strategies and Service Quality	172
5.1.6 Effect of Hospital Type on the Relationship between Financing Strategies and Service Quality	173
5.2 Conclusion	174

5.3 Recommendations.....	176
5.4 Theoretical Implication.....	178
5.5 Suggestions for Future Research	179
REFERENCES	181
APPENDICES	210
Appendix I: Introductory Letter.....	210
Appendix II: Consent Form	211
Appendix III: Questionnaire For Health Care Workers.....	212
Appendix IV: Questionnaire for Patients.....	220
Appendix V: Output.....	222
Appendix VI: List of Specific Sampled Hospitals.....	226
Appendix VII: NACOSTI Permit Card	234
Appendix VIII: NACOSTI Research Authorization.....	235
Appendix XI: MU Permit	236
Appendix XII: MoH Clearance Letters.....	237
Appendix XIII: KNH/UON IREC Clearance	240

LIST OF TABLES

Table 3.1: Target Population.....	93
Table 3.2: Measurement of variables.....	97
Table 4.1 Mahalanobis Distance.....	112
Table 4.2: Response Rate of Questionnaires	113
Table 4.3: Response by Hospitals.....	114
Table 4.4: Hospital Age against Financing Strategies and Service Quality	116
Table 4.5: Facility Type against Financing Strategies and Service Quality	118
Table 4.6: Hospital Level against Financing Strategies and Service Quality.....	120
Table 4.7: Bed capacity against Financing Strategies and Service Quality.....	122
Table 4.8: Ex-Chequer	124
Table 4.9: Out of Pocket	125
Table 4.10: Insurance.....	128
Table 4.11: Debt Financing.....	130
Table 4.12: Network Financing	131
Table 4.13: Expected Service Quality	133
Table 4.14: Perceived Service Quality.....	135
Table 4.15: Reliability	137
Table 4.16: Factor Analysis for Independent Variable.....	140
Table 4.17: Factor Analysis for Expected Service Quality.....	142
Table 4.18: Factor Analysis for Perceived Service Quality.....	143
Table 4.19: Data Transformation	144
Table 4.20: Normality.....	146
Table 4.21: Lavene Test.....	146
Table 4.22: Breusch-Pagan and Koenker test	147
Table 4.23: Linearity.....	148
Table 4.24: Multicollinearity	149
Table 4.25: Autocorrelation/Independent of Errors.....	150
Table 4.26: Correlation Analysis	151
Table 4.27: Control Effect	153
Table 4.28: Gap Analysis (Hypothesis 1).....	153
Table 4.29: Hypothesis Testing (Direct effect, Hypothesis 2, 3, 4).....	155

Table 4.30: Moderating Effect of Bed Capacity on Relationship between Equity Financing and Service Quality	156
Table 4.31: Moderating Effect of Bed Capacity on Relationship between Debt Financing and Service Quality	157
Table 4.32: Moderating Effect of Bed Capacity on Relationship between Network Financing and Service Quality	158
Table 4.33: Moderating Effect of Facility Type on Relationship between Equity Financing and Service Quality	159
Table 4.34: Moderating Effect of Facility Type on Relationship between Debt Financing and Service Quality	160
Table 4.35: Moderating Effect of Facility Type on Relationship between Network Financing and Service Quality	161
Table 4.36: Summary of Hypotheses Testing Results	166

LIST OF FIGURES

Figure 2.1: Conceptual Framework	91
Figure 3.1: Interactions Plots	105
Figure 4.1: Moderating Effect of HBC on EF and SQ	162
Figure 4.2: Moderating Effect of HBC on DF and SQ	163
Figure 4.3: Moderating Effect of HBC on NF and SQ	164
Figure 4.4: Moderating Effect of FT on EF and SQ	165

OPERATIONAL DEFINITION OF TERMS

- Equity Financing:** Equity financing refers to raising funds by selling shareholding interests in the company. (Chun & Steve, 2015). For purposes of this study, it is defined as any funding strategy where the patient or client has an input in or has a contribution in raising the funds. They are categorized as Ex-Chequer, Out of Pocket and National Health Insurance Fund (NHIF)
- Facility Type:** Facility Type has been defined as academic status (Bhatt, *et al.*, 2017), According to (Brand *et al.*, 2012, facility type is based on ownership, while (Lee *et al.*, 2019), Facilities were categorized as academic or community centres per Commission. High-volume hospitals were those that performed 11 or more hepatectomies per year. Multilevel logistic, mixed-effects models were used as well to identify. For purposes of this study, facility type is based on ownership.
- Financing Strategies** The basic components of financial strategy: goals, principles, financial methods, and determinants. Alternative types of financial strategies (conservative, moderate and aggressive (Otola, 2011). For purposes this study, it consists of different sources of funding healthcare services such as equity, debt, and network financing.

Hospital characteristics: Hospital characteristics includes environment (incentives, market characteristics), structure (network membership, ownership, teaching status, geographical setting, service size) and operational design (innovativeness, leadership, organizational culture, public reporting and patient safety practices, information technology systems and decision support, service activity and planning, workforce design, staff training and education), (Brand *et al.*, 2012). For this study, the hospital characteristics of interest will be: Bed capacity (service size) - Level of the hospital (service activity) type of the hospital (ownership) and age of the hospital.

Interactions: Extracted from the literature, there are distinct and highly developed concepts for instance viewing interaction as dialogue, transmission, optimal behaviour, embodiment, and tool use. Importantly, these concepts are associated with different scopes and ways of construing the causal relationships between two variables (Hornbæk, & Oulasvirta, 2017). For purposes of this study, interactions are used as causal relationship between different variables.

ABBREVIATIONS

CBHI	Community Based Health Insurance
CBHIS	Community Based Health Insurance Scheme
DIBs	Development Impact Bonds
FBOs	Faith-Based Organizations
GDP	Gross Domestic Product
GoK	Government of Kenya
KCBHFA	Kenya Community-Based Health Financing Association
KNH	Kenyatta National Hospital
MIPs	Medical Insurance Providers
MoH	Ministry of Health
MTEF	Medium Term Expenditure Framework
NGOs	Non-Governmental Organizations
NHIF	National Health Insurance Fund
NTA	National Taxpayers Association
OECD	Organization for Economic Cooperation and Development
PHC	Primary Healthcare
RoK	Republic of Kenya
SDGs	Sustainable Development Goals

SHIB	Social Health Insurance Benefit
SIBs	Social Impact Bonds
THE	Total Health Expenditure
UHC	Universal Healthcare
UNDP	United Nations Development Program
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background to the study, statement of the problem, study objectives hypotheses, the significance of the study and the scope of the study.

1.1 Background of the Study

Provision of service quality in healthcare has significant relationship with customer satisfaction customer retention, loyalty, costs, service guarantees and growth of organization. Mosadeghrad, (2014) infers that quality in medical care is an outcome of patient and medical personnel collaboration in an altruistic surrounding. Individual factors of the giver and the infirm, as well as elements related to the medical care establishment, health care system and the wide surrounding impact the quality of medical care provision. Al-Damen (2017) attests that service quality has been described as the outcome of the contrast that clients infer between their requisites concerning a provision and their outlook of the way the service has been executed.

Service quality is more complex as compared to quality of goods due to its intangibility and the presence of human element. Based on Lukea-Bhiwajee *et al.*, (2010), services are generated and consumed concurrently in the presence of both the client and the personnel as opposed to products. The behavior of the people offering the services therefore greatly increases the probability of satisfaction or dissatisfaction of the receiver.

According to WHO *et al.*, (2018), quality of care can be described as the level to which health services for a single person as well as communities raise the probability of

positive results in health that correspond with present expert insight (WHO *et al.*, 2018). It further defined the characteristics demonstrating quality healthcare service as comprising timeliness, effectiveness, efficiency, safety, people centeredness, integration, and equity. In the words of Øvretveit, quality care is the ‘Provision of care that surpasses patient requisites and attains the highest possible clinical results with the assets provided.

Apart from the human element, healthcare service quality is affected by a number of other factors including finances and the environment in which the services are offered. Given that healthcare service providers serve patients with different needs, factors such as experience, individual abilities, personalities, and varying availability of enough resource in different hospitals, there is a high likelihood of the service quality inconsistency. This state continues to be exacerbated by the patients or clients outlook of operational issues which they observe and come across with during their time of treatment for instance, the infrastructure, internal protocol, exchanges with doctors, nurses as well as the rest of the subordinate staff which may be wanting and impassive.

In support of this case, an analysis by Mosadeghrad, (2014) on factors influencing service quality, established that the plight of patients may influence the quality of health benefit services. He reasoned that now and then patients fail to meet the expenses related to their treatment and therefore resorts to skipping treatment. In a case where the patient does not adhere to physician’s instructions as a result of insufficient funds therefore, the treatment will not be effective. Acharya, (2018), supported this argument by stating that most people in Africa go without health care from which they could benefit greatly especially the poor who may not be able to afford health care in private hospitals. This plight has been witnessed from time to time in Kenya whenever there

are industrial unrests from the health workers in public hospitals and the poor Kenyans cannot afford the services from private hospitals.

Njoki, (2018) study on Health Financing, established that health sector is dependent on various wells of endowment such as, households, the government, donors (NGOs and faith-based organizations included) private firms and also health insurance schemes which can as well affect service quality. The study further established setbacks in executing a comprehensive health benefit financing strategy which enhances effective planning, budgeting, and provision of health services. The study pointed out that health system has also struggled with stagnant or declining budgets for health, system inefficiencies, persistently poor service quality and lack of equity.

Jones, (2014), established that several nations within sub-Saharan Africa lack the capacity to offer sufficient quality and coverage of health provisions due to pecuniary factors in addition to deteriorating reserves. As such heightened degree of demand, contributed by earnings will steer the delivery of quality care. Access to services for individuals and households in Kenya is determined by the amount of financing they can afford. This means those who cannot afford the basic healthcare are constrained by the cost of healthcare service because the level of care provided depends on the amount of financing, they have in hand to access this service. This observation has been supported by a study done by World Bank on financing health in low-income countries whereby after the Government of Uganda decided to abolish the user charges, the result was that there was an impact on the poor's use of provisions within the public health field amenities. The World Bank (2005) suggest that further research has demonstrated that there was an increased prevalence of value in public centres following annulment where usage by the destitute rose compared with the usage by those who are well off.

Going by Wanjiru, (2014). Health benefits in Kenya is disorganised by coverage scheme where the destitute and the unable are marginalised at a huge degree. The disintegration of health sponsoring systems causes inadequacies in service delivery and funding. The most crucial being the lack of a successful quality assurance framework in addition to weak institutional management and imperative measures, this has contributed to a credibility gap in Kenyan Health funding organizations.

Due to the challenges Kenya is faced with in medical care funding, the rise in the allocation of government budget on the Ministry of Health (MoH) from Ksh 26 billion in 2012 to Ksh 50.37 Billion in 2015, are approaches taken by the Government of Kenya (GOK) to ascertain that there is impartial delivery of quality public health provisions but still they have not had much impact (World Bank, 2014). It is also noted that based on poor rationalization of coverage, patients have an obvious incentive to seek care where they are covered against the costs of treatment resulting in patients with medical cover seeking for medical care in expensive health facilities for simple ailments rather than small health facilities which can provide quality treatment at affordable price (Bozic, 2016).

Service quality has further been affected by the fact that providers have incentive for unnecessary referrals if costs can be avoided by referring patients to another “budget”. For example, County facilities may refer patients to tertiary national hospitals since these are financed by the MoH hence avoiding the cost. Varying payment mechanisms may further compound this issue. The more fragmented the financing system, the more difficult it is to avoid negative effects (Tam, & Cammack, 2014). It is also possible that some areas in need may fall between the gaps of different funders (especially if the areas are poor and providers are motivated by profits). On the other hand, some areas

may be oversupplied with care, especially high-cost technologies. As a result, investments into disadvantaged area are reduced and recurrent costs are increased. A study by Kimani, (2012) pointed out the case for diagnostic devices, where providers can induce its demand diverting the funding while quality of care may suffer.

Having experienced setbacks with regards to sponsoring healthcare provisions Kenyan government resorted to allowing some hospitals independence to oversee administrative restructures that are speculated to steer to improved quality of care, higher profit realization or reduced expenditure. This was well demonstrated by transformation of Kenyatta National Hospital (KNH), the state's large countrywide referral and teaching hospital (Legal Notice, 1987) and Moi Teaching and Referral Hospital (MTRH) the second largest (Legal notice 1998) to a state-owned enterprise.

Despite resource allocation clustering around health services at great cost globally, the same is yet to reflect on its service quality. Sorensen *et al.*, (2015) states that the health department also falls short in technical know-how needed to alleviate the detrimental impacts on health from other departments and capitalize on the value added to health by the rest of the sectors. This problem is compounded by insufficient spending in public health and international donor funding getting shakier in the current global economic climate (Acharya, *et al.*, 2017). There is therefore the need to go beyond the adequacy of funding and explore the impact of different financing strategies in healthcare service quality with the aim of getting the appropriate mix and move towards universal healthcare.

According to Kutzin, (2013), Universal Healthcare Coverage (UHC) enables everyone with or without money to obtain the services that focuses on the top crucial causes of malady and death in addition to making sure that the state of these provisions is

appropriate to enhance the health of the citizens who attain them. Kenyan Government is putting mechanisms in place to enable UHC implementation which, includes funding through the National Health Insurance Fund (NHIF) and partners. While UHC could address the issue of funding and accessibility, there is still needed to establish whether there are other factors that affect healthcare service quality despite the financing.

According to Sorensen, *et al.*, (2015), they noted that delivery of healthcare services has intricacies and various countries globally deplete a great deal of resources in an effort to offer it. It appears that very little success has been realized in enhancing the quality of service in public health entities despite their efforts to alleviate the case, this is amplified by stringent knowledge on the aspects that compromise the provision of quality service in the public health sector.

Mosadeghrad, (2014) in a study done on factors influencing healthcare service quality, established a number of factors affecting service quality to include resources and facilities, leadership and management, collaboration and partnership development. It has also been established in another study that in developing economies, healthcare delivery infrastructure has inadequate; experienced healthcare professionals and a shortage in the supply of significant drugs; there exists inefficient acquisition and issuance frameworks that lead to unequal access to treatment (Cho, *et al.*, 2012)

1.1.1 Service Quality

Andotra *et al.*, (2015), contend that service quality has been a popular deliberation since 20th century and its premise remains significant in assisting institutions to generate distinction and have a competitive edge in a period of undetermined world proliferation. It has been substantiated that service quality plays a key role in portending customer satisfaction and loyalty. According to Lukea-Bhiwajee *et al* (2010) the service sector

plays a sustained crucial part in the economy of various states. In the current world combative setting providing quality service is thought of as a fundamental system for thrive and sustenance.

Quality has been defined as conformance to requirements (Crosby, 2013). Deming, (2012) defines quality as absence of variation while Joseph Juran emphasized that quality is all about communication, management, and people (Neyestani, 2016). As per Mohanty, (2012), experts cutting across the academic compass have also taken part in the cognizance of service quality, nevertheless, with more than two hundred years of research and interactive deliberations, theoretical exercise on service quality can be explained best as contradictory. Different from concrete goods, services are generated and used up simultaneously of the client as well as the vendor. The existence of the human aspect during the process of service provision hugely raises the potential of mistakes of staff and clientele. This mishap is caused by the abstract behavioral practices that cannot be easily checked and regulated.

Prakash and Mohanty (2011) states that service quality originated from the increasing significance of services in the adjusted economics past 1960 (Godfrey, 1999) elaborates that this was the progression of the conventional elucidation of product quality to encompass the services that come with the commodity. In his argument, some scholars (Collier, D. A, & Meyer, S. M., (1998). Schmenner (2004) have made concerted efforts to come up with categorical systems or positioning frameworks for services instead of service quality; nonetheless, not one of these frameworks or systems is absolutely sufficient to establish the linkage between the service and the process of provision. He argues that service quality can reward rich proceeds when well conducted.

Enhanced degrees of service quality yield enhanced degree of customer satisfaction that brings about higher sponsorship dedications and higher sales. Although product strategy or price also has the possibility to bring about such results, when conducted appropriately, service quality is harder to duplicate and possibly can bear a more lasting competitive edge; well executed service quality is a resource to be directed. Rust et al. (1995) contends that both customer satisfaction and service quality are ordinarily analyzed through the gap strategy which is, the variation in expectations and perceptions. The disparity comes about majorly due to various clarifications of expectations. Customers' perception of quality emerges from a juxtaposition of their pre-service requisite with their effective service encounter (Parasuraman *et al.*, 1985, 1988; Lewis and Mitchell, 1990), It is the belief of Vázquez *et al.*, (2001) that when perceptions surpass expectations, a service will be regarded exceptional on the other hand if it equals the expectations, it will be considered positive and acceptable; the service will be regarded terrible, poor or lacking if it fails to match the expectations.

In accordance with this school of thought, a system of measurement for assessing service quality was designed by Parasuraman et al known to many as SERVQUAL. Krishna. *et al.*, (2010) contends that this calibration functionalizes service quality by computing the variation between expectations and perceptions, where both are analyzed with respect to the 22 elements that stand for five dimensions of service quality; 'responsiveness', 'tangibles', 'empathy', 'reliability and 'assurance'

Krishna *et al.*, (2010) observed that over recent years' service quality had grown popularity among experts, researchers, and administrators because of its tenacious implications on corporate performance, customer loyalty and satisfaction, reduced expenses, and profitability. They explained that the disparity between what is

considered adequate service and required service is referred to as Zone of Tolerance and that the more crucial the SERVQUAL dimension, the greater the desired service degree and slimmer the zone of tolerance. Based on Mohammed, (2014), service quality in the health sector is more intricate to elaborate and analyses as compared to other departments. Peculiar features in the medical benefit sector for instance simultaneity, intangibility heterogeneity pose a challenge in defining and assessing quality unlike other industries. Medical care service is an abstract commodity and therefore cannot be touched, perceived, seen, computed or calibrated in the same manner as manufactured products.

In his assertion, Quality health care is a bias, intricate and multi-faceted ideal. In Donabedian's definition, healthcare quality is said to be 'the application of medical science and technology in a way that maximizes its benefit to health without correspondingly increasing the risk. He categorizes quality into three elements: Amenities, Technical quality and interpersonal quality.

Technical quality refers to the success of care in generating attainable health benefit. Interpersonal quality is the degree of compliance to patient needs and choices, while amenities entail aspects like gratification of physical environment and aspects of the institution of service delivery.

A huge setback that public health centers face is attaining the increasing requisites and need for health services as a result of increasing demographics, growth in cases of adverse state of health in addition to the existence of immigrants within the nation. On top of the speculated increase in the ratio clusters of youth and the aged, lack of impetuses and protocol, heightened rates of brain drain mostly to Gulf nations because of low wages, extended working time and growing healthcare expenses. Furthermore,

in his assertion, Al-Damen, (2017) infers that service quality has turned into a significant deliberation because of its positive link to revenue, cost reduction and market share.

Hospitals have and continue to be a space of care from which the public can attain full medical benefits whether preventive or curative. In the infirmaries, quality of care is analyzed using two indicators: patient satisfaction and patient outcomes. Satisfaction is an individual's sense of gratification or disdain rising from weighing a commodities or service's expected performance (or result) in line with his or her speculations. In accordance to Brennan *et al* (1999), patient satisfaction is explained as a person's assessment of the degree to which the care offered has reached the person's speculations and partiality.

It is the belief of Abuosi and Atinga (2012) that Healthcare clients in emergent states continue to become educated on their right to quality medical benefits. Accordingly, offering quality services in medical care institutions is gaining ground in the present. Various health department partners, healthcare clients as well as government corporations are currently stressing on service quality provision as a way of averting severe treatment results and to meet client requisites and ensure quality meets price. Ordinary healthcare clients are impartial to using services that offer quality as well as best-value care. This goes to show that, health care institutions could potentially experience administrative challenges unless service consumers are conveniently provided with excellent value care and risky outcomes reduced. Since healthcare services tends to negatively affect the Quality of life as compared to other service industries, medical professionals that do not comprehend the significance of providing service quality and customer satisfaction may lead to a possible reduction in patients.

Patients are continuing to understand more concerning the quality of service and amenities provided at health centers. Rehaman and Husnain, (2018) infer that users of medical care provisions have especially grander opportunities and imperiously dictate an enhanced class of responsiveness, precision, empathy, and reliability from accommodation providers.

In an effort to improve service quality offered in health facilities in the country, MoH came up with Kenya Quality Management of Health (KQMH) training in the early 2000 which was revised in 2014. The Ministry of Health and development stakeholders pioneered the KQMH alongside a training course to instruct health administrators in reinforcing quality management at all levels. The draft curriculum was created to concentrate on training needs at all levels of health service provision including the policy level, by fostering the use of the 5S–Continuous Quality Improvement (CQI)–Total Quality Management (TQM) and ISO 9001:2008 strategies as crucial tools for quality management (MoH, 2014)

The MoH concerned with varied health outcomes, further came up with a handbook to guide management. The concern was that Health outcomes across different sites are varied, despite funding, and are often linked to the ability of health care workers to innovatively overcome common and sometimes severe health system challenges matching service delivery to patient or service provider barriers and constraints without necessarily requiring additional resources to deliver high quality services. These innovations would relate to management of human resources, distribution of roles and responsibilities at facility level, patient flow design, facility management, local strategies, and tools. It emphasized that to standardize quality of care across the country;

dissemination of replicable practices in Kenya's devolved system of government cannot be over emphasized (MoH, 2016)

1.1.2 Healthcare Financing

Healthcare financing can be defined as a framework for funding healthcare expenses. Sponsorship of healthcare provisions has been a huge issue to every government during a period of high medical care expenses. For emergent nations where good wellbeing is regarded a poverty elimination strategy, it is necessary that the hospitals are well financed to accomplish delivery of healthcare services (Akortsu & Abor, 2011). Other strategies to combat poverty should as well be engaged in order to reduce the burden of financing Healthcare.

According to Alkhamis & Hassan (2013), a framework of financing comprises revenue-raising mechanisms (i.e., sources of pooled funds and contribution methods such as community pooled funds), purchasing healthcare services by transferring the pooled resources to service providers on behalf of the population, out-of-pocket (OOP) payments by the beneficiaries for the package of the services offered by a provider to the patient. Payment by insurance schemes for their beneficiaries for the services as per the cover.

There are three reserves from which funding for health care is obtained, they include private, public, and quasi-public sources. Nevertheless, Irinoye, *et al.*, (2014) observe that there are considerable gaps internationally in the way that profits are drawn from these reservoirs and the respective significance each has in the total funding for healthcare. In Kenya healthcare is financed through; Tax revenues (Ex-chequer), out of pocket payments (user fee), health insurance (social, community based and private),

donor funding (Network financing), bank loans (debt financing), exemptions, subsidies, and waivers (Munge & Briggs, 2014).

Ex-Chequer is a health financing system where money collected by the Government through taxes are channelled from treasury through the Ministry of Health to public hospitals to finance healthcare services. According to Kiima & Jenkins (2010), all health facilities have been gazetted as audit units under the Ex-chequer and Audit Act, allowing them to obtain money directly from the exchequer, and have it accounted for. Level 2-6 are presently acquiring funds, dispatched electronically from Treasury, conveyed through the MoH, to the facilities.

Though funding is still inadequate, there has been a gradual increase of budget allocation to the Ministry of Health and subsequently the devolution of healthcare to the counties. However, even with these efforts, there is still very little to show in terms of service quality improvement (Wavomba and Sikolia, 2015).

According to the Ministry of Health policy brief, (MoH, 2019), the budget increased from Kes 77 billion in 2011/12 to Kes 94 billion in 2012/13 and reduced to 78 billion in 2013/14 (Kes 36 billion to MoH and Kes 42 billion to the Counties due to devolved health function to the County Governments. The Sector absorption rate was 79 per cent, 87 per cent, and 69 per cent of the approved budget in the period under review with recurrent vote absorbing 91 per cent, 100 per cent, and 80 per cent respectively. Development vote absorbed 63 per cent, 67 per cent, and 58 per cent respectively, in the same period. Further, 70% of the development budget was donor funded. In overall, funding to the health sector has ranged from between 6-8% of total government spending in recent years, “well below the [2000] Abuja declaration target of 15% (Dustin R. Turin, 2010).

In the Financial Year 2015/16-17/18, MTEF period the sector requires Kes 88,983 million compared to a resource allocation of Kes 48,407 million. Further, requirements are Kes 93,003 million and Kes 97,653 million for the 2016/17 and 2017/18 respectively. The Sector's resource requisites are commanded by the sector protocol commitments as well expressed in the Vision 2030 and the Second Medium term Plan (2013-2017) in particular while seeing to the streamlining of the Health department guidelines. However, the allocation has always been short of the requirements.

With the introduction of cost sharing, state corporations under MoH and County Government hospitals have their own capital obtained from user fee charges (Out of Pocket) for undertaking certain operations. In this framework, consumers are required to cash in a small amount to cater for consultation as well as materials. This charge goes to the cost dividing kitty of each structure where it is used for service delivery and advancement. Significant strengthening of capacities is a prerequisite to ascertain there is transparency, liability and that the appropriation of public resources is fitting.

Based on Republic of Kenya (RoK, 2014), under the present medical care funding scheme in Kenya, 34.5% of medical benefit charges are remitted by customers when receiving the services. This greatly marginalises those from lower economic backgrounds who may not be able to afford paying for the services and who are not in the position to attain other forms of capital. This demonstrates a considerable barrier to medical care access given that almost half of the Kenyan demographic is surviving under the poverty mark. The distribution of costs scheme entails a selection of charge reductions and removal made to improve access to provisions for those from lower economic groups. However, the success of the framework had been pulled back by a lack of capacity to determine which clients are vulnerable and by minimal motivation

for facility administrators to provide free passes and waivers. Extending such choices to needy customers may also bring about profit reduction that is scarcely recovered through other capital allotment.

Health Insurance comprises of social insurance, private insurance, and Community based health insurance. Social insurance is managed through the National Hospital Insurance Fund (NHIF) which, is a state-owned enterprise created subject to the National Insurance Fund Act, number 9 of 1998. Before this legal change, the pool was present as a wing under the Ministry of Health as from 1966. The Fund is responsible for furthering acquisition of quality medical care by the help of tactical resource gathering and healthcare procurement in partnership with benefactors. NHIF strives to garner financial risk security against the expense of health care provisions for all Kenyan citizens through expedient financial administration of funds dispensed by members from both formal and Informal sector of the economy (NHIF Act, 1989). As per the NHIF policy Brief to NHIF by (Munge, *et al.*, 2018), coverage of the NHIF, stood at approximately 15% of the population. The fund financial position from their statement as of 30th June 2018 was 42,572,180,955 up from 37,402,563,712 as at 30th June 2017. The fund has also expanded its services over time to accommodate more ailments and a wider population (NHIF Performance Report 2018)

Private health insurance has over time been depicted as deliberate, for mercantile business coverage. Nonetheless, looking into private coverage globally, it is clear that a huge number of affiliations are defined under the classification of private insurance and that the differences between private and public insurance continue to become negligible. The OECD Adhoc Group on Private Insurance employs the variations on how insurance is sponsored as the key determinant to differentiate public and private

insurance. Sekhri N. & Savedoff W, (2006), infer that generally, all funds are obtained from household revenues, however in public insurance coverage, these funds are passed through the government through a general or social insurance tax collector, in the other hand in private insurance the funds are remitted explicitly to the risk pooling company. Indeed, private health insurance contributes wholesomely worldwide.

According to Colombo, & Mercier, (2012). Private Health Insurance generally contributed to 7.5% of healthcare expenditure in 2006 and rose to 9% in 2013. The proliferation of the private health insurance in Kenya is close to 2% of the average demography and can be distinguished into two sections: 1. Medical Insurance Providers (MIPs- the domestic correspondent to managed care organizations) and 2.) Insurance Enterprises (underwriters) Netherlands Enterprise Agency (2016).

Community based health insurance (CBHI) or community financing for health is referred to as a mechanism whereby households in a community some vulnerable (the population in a village, ward, constituency, or other regional area or ethnic or social economic sect) sponsor or collaborate in funding the present and financial expenses related to a particular group of health provisions, therefore also participating in the administration of the local financing system and structuring of health provisions (WHO, 2003)

According to Mwaura & Pongpanich (2014) Out-of-pocket settlements bring about monetary constraints to health care acquisition as such there is a growing interest in the part played by community-based health insurance schemes (CBHIS) in enhancing justice and procurement of needed medical attention for the poor. Their discoveries revealed that persons in the bottom lowest income quintiles are more likely to be

enrolled in CBHIS in comparison to others. They also established that those who had CBHI cover were likely to be hospitalized as compared to those who had no cover.

Though CBHIS coverage is still minimal in Kenya, it has been piloted in a number of areas. In 1988, CBHIS in the district of Samburu located in the north of Kenya had its enrolment rise from an initial of 12 to 218 households in a period of 18 months. However, it dropped to below 50 households by end of the 18th year. This shows that there is a need for the CBHIS but more needs to be done in restructuring it and its implementation.

Debt Financing of Healthcare (Bank Loans) is a means of financing Healthcare by borrowing from the bank as a long-term or short-term loan and bank overdrafts. This method of financing is mainly used by privately owned hospitals or profit-making hospitals in general due to their credibility and flexibility in borrowing decision making. Public Institutions can also utilize Public Private Partnership (PPP), bonds or debt swaps to finance their development projects.

According to Intellectap (2019) Social Impact Bonds (SIBs) and Developmental Impact Bonds (DIBs), have the potential to enhance the success of state healthcare budgets at the local as well as national levels in addition to furthering outcome driven technological financing and sponsorship. These innovative financing models help to fund healthcare through contracts where private investors provide upfront flexible funding to healthcare providers and outcome funders (usually government in case of social impact bonds and development finance institutions in case of development impact bonds) repay these investors based on the healthcare outcomes achieved by those who receive the services.

Donor Funding is a means of financing healthcare by external or internal agencies and non-governmental organizations such as WHO, WB, United Nations Development Program (UNDP) local philanthropists among others also referred to as Network Financing in this study. Despite increased domestic contributions to health, Kenya is still dependent on donors, with 57% of the FY 2014/15 development being donor funded (Health Financing Profile, 2016). Bose *et al* (2018) contend that foreign wherewithal are reducing as a proportion of THE, however they persist in taking up a critical part in financing healthcare. Foreign investments from growth stakeholders comprised 32 percent of THE in 2009/10. The number had reduced by 10 to 22 percent of THE by the year 2015/16. As a proportion of GDP, investment parties financing health reduced to 1.1 percent from an initial 1.8. During the same era, the state as well as other sources of fund's remissions rose from 27 to 34 percent, defeating foreign capital as a share of the THE. Foreign aid has consequently dropped unequivocally since 2012/14, from KSh 64.1 billion to KSh 53.2 billion in 2015/16 (MOH, 2017b) Dutta *et al* (2018).

1.1.3 Hospital Characteristics

Different hospitals have different characteristics. These could include the level of the hospital (normally determined based on the kind of services the hospital can offer), the number of beds, ownership of the hospital (Public, Private or Faith-Based), age of the hospital and the general environment where the hospital is set up.

According to Sorrenen *et al.*, (2015) despite the attempts to improve the quality of service in public institutions, not much has been achieved due to limited information on other factors that ail the delivery of quality service in the public health sector. This

observation points at factors like hospital characteristics among others which could be affecting service quality and hence the need to establish and address them.

1.2 Statement of the Problem

Literature presents the delivery of service quality as a concern world-over. From a study in Singapore by Lee, it discusses the effort to deal with the deficiency in the delivery of service quality. Whereby, a way to measure the impact and the potential loss of customers due to poor quality service was introduced (Lee *et al*, 2006). This approach by Lee advocated that the healthcare industry should use a system view to deliver quality healthcare by taking into account quality, cost, and efficiency factors in a holistic manner.

Service quality in Kenyan healthcare just like in the rest of the world has remained a challenge. Kenya health sector has from time to time been affected by industrial unrests by healthcare workers which intern affects service quality. Apart from the human aspect of health system, a number of studies have pointed out inadequate financing as a main contributor to inaccessibility to quality healthcare. There is a concern that medical care expenses continue to be a significant issue with 40.5% of families not obtaining health provisions, financial constraints being a major cause (Durairaj *et al.*, 2010)

Gitahi, (2017) observe that funding the public health service delivery within Kenya has proved to be a huge challenge, pushing the national authorities to change from conventional techniques of funding medical provisions to a modern framework of user charges in public health institutions. Kenyan Government in the effort to improve healthcare, developed a medical funding for constantly rising demand and the need for superior and enhanced services by ensuring incremental budget for healthcare.

Subsequent to past deliberations on appraisals of how much money is required to sustain medical care within Kenya and the various sources of capital necessary to improve service quality, there has been wide discussions on accurate levels of donations from these sources with little consensus on the issue (Carrign, 2014)

Recently, other concern areas have revolved around the devolution of funds for healthcare and precise contributions by the government to healthcare activities to increase the level of service quality delivery in the country (Kimani, 2012). Despite the efforts to increase finances and implement devolution, service quality has remained a concern raising the question as to whether other factors like hospital characteristics could be having an effect on service quality, health financing notwithstanding.

A look at the literature shows that although there have been studies on healthcare financing and quality of services, there is paucity of data on what role the type of institution, level of institution, the bed capacity and age of institution play in moderating provision of service quality. It is therefore against this background that the study sought to establish the moderating effects of hospital characteristics on the relationship between financing strategies and service quality in hospitals in Kenya

1.3 Objectives of the Study

The purpose of this study was to establish whether there is a gap between the expected and the perceived service quality, the effect of financing strategies on delivery of quality healthcare services in level 4 to level 6 hospitals in Kenya and the moderating effect of Hospital characteristics in the provision of service quality healthcare. The specific objectives were:

- 1 To determine the gap between quality expectations and quality perception of

healthcare services in Kenya

- 2 To establish the effect of equity financing strategies on quality of healthcare services in Kenya
- 3 To find out the effect of debt financing strategies on quality of healthcare services in Kenya
- 4 To analyze the effect of networks financing strategies on quality of healthcare services in Kenya,
- 5 To establish the moderating effect of hospital bed capacity on the relationship between financing strategies and quality of healthcare in Kenya
- 6 To determine the moderating effect of Facility Type on the relationship between financing strategies and quality of healthcare in Kenya

1.4 Hypotheses of the Study

The study proposed the following hypotheses:

H0₁: There is no service quality gap on quality expectations and quality perceptions in healthcare provision by hospitals in Kenya.

H0₂: Equity financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya.

H0₃: Debt financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya.

H0₄: Network financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya.

H0_{5a}: There is no moderating effect of hospital bed capacity on the relationship between equity financing strategies and quality of healthcare service in Kenya.

H0_{5b}: There is no moderating effect of hospital bed capacity on the relationship between debt financing strategies and quality of healthcare service in Kenya.

H0_{5c}: There is no moderating effect of hospital bed capacity on the relationship between network financing and quality of healthcare service in Kenya.

H0_{6a}: There is no moderating effect of facility type on the relationship between equity financing strategies and quality of healthcare service in Kenya.

H0_{6b}: There is no moderating effect of facility type on the relationship between debt financing strategies and quality of healthcare service in Kenya.

H0_{6c}: There is no moderating effect of facility type on the relationship between network financing and quality of healthcare service in Kenya.

1.5 Significance of the Study

The current state of healthcare services in Kenya is not immune from the shocks of shifting healthcare services financing from the national government to most of the financing roles by the county governments according to the 2010 constitution of Kenya. Furthermore, there is no single study done in the country that examines the uniqueness of Hospital characteristics and what roles these characteristics might be playing in moderating the quality of services provided. Key questions remain unanswered in the Kenya healthcare sector: Under what conditions are Hospital characteristics helpful in promoting or enhancing high quality services with whatever financial strategy? And for whom are certain Hospital characteristics helpful in enhancing service quality?

In Kenya, a key knowledge gap currently existing is the understanding of unique conditions under which financing, and quality health services are related. Most importantly, what contribution the hospital characteristics bring to quality service provision. With the paucity of data in this area, it is difficult to craft and apply national policies that would address both major and minor contributions to quality service provision in Kenya. The Government can use the Discoveries from this investigation to inform the policy making process within the health Industry.

This research assists the party to comprehend the main and small predictors of Kenya's quality medical care. The research will also prove crucial to partners, benefactors, and sponsors in generating and organizing risk areas requiring assistance. The revelations of this analysis will in addition aid in informing the main adjudicators in private and public health centers nationwide and locally, in making policies and on how to ascertain health care cost in the nation.

Academicians aim at expanding the body of knowhow; the same body of knowledge has been known to adjust and analysis is constantly the single way to understand a single event over a period of time. Therefore, this study would be beneficial in creating prospects for conducting extensive investigations on health care spending. The paper will serve as tool for citation for linked topics.

As highlighted in many forums, Kenya struggles with lack of adequate funding to meet its increasing health benefit demand. It is essential to seal this disparity in expertise in Kenya and subsequently settle on ideal foundation for policy makers to sufficiently, successfully and accordingly finance Kenyan health benefit networks.

1.6 Scope of the Study

The study focused on the effect of healthcare financing strategies on the delivery of quality healthcare services in hospitals in Kenya. Most importantly, the unique contribution of hospital characteristics will be critically examined in-order to identify contributions to service quality provision and patterns emerging with the different levels of these hospital characteristics. The study was conducted in 233 sampled out of public, private and faith-based hospitals registered by the Ministry of Health and operating in Kenya. The study was conducted between December 2016 and July 2017.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature available on key issues dealing with effect of health financing on provision of quality health service and how it affects the life of the people who go to seek medical assistance. It also explores the understanding of moderation and how examining a third variable is important in asking the missing questions while looking at the effects of how an independent variable relates to a dependent variable. This is followed by a systematic review of relevant literature organized in accordance with the research questions.

2.2 Concept of Quality Services

The phrase quality is used to illustrate services or goods. It expresses several meanings to several individuals and institutions as such it doesn't have a global denotation. In addition to this there exist many meanings given to quality from publications in a bid to set a standard agreement. Quality as an ideal from publications is strongly linked with product. Hence, quality concerns gained popularity in the manufacturing period and that many definitions of quality carry features of products. Ross *et al.*, (2017) says that as a means to develop more markets and increase shares in the market firms need to focus on raising their product and service quality. According to Crosby *et al.*, (2013) quality is congruence to requisites. The descriptions insist that when an establishment adheres to the sequences that clientele provide, the commodity or service in question is regarded of quality. Prior to declaring a product or service fit, it needs to be free from flaws, is up to the set due dates and guarantees successful results. The adequacy of this meaning is evaluated; the requisite is viewed as stringent. The supplier is inclined to

decide on just achieving the particulars while another may generate a commodity or service that is best posed to match the unexpressed wishes of the customers.

2.2.1 Quality in Service Industry

Khan and Fasih, (2014) contend that companies in the current service industry are drawn intrinsically to offer top-notch service as a means of succeeding in expanding cut throat local and international market regions. As service delivery companies encounter increasingly combative and intricate corporate field, they are immediately pushed to vitally assess their service provision protocols. The agenda of such internal examination is eventually linked to customer satisfaction and how fundamental outcomes can be realized through providing service quality to clients through consummate liaison grounds. This significantly applies to public sectors as it does to those in the private industries. Scharitzer and Korunka, (2016) say that companies in the public industry are striving to ensure management is not only more public-centered but also more structured.

Glickman *et al.*, (2007) infer that while services are a huge and critical part of the global economic, the ideals and procedures of service quality are not as well formulated as compared to quality in manufacturing. It is the belief of Zaid *et al.*, (2020) that the publication opines that service firms are holding back their manufacturing partners in line with the successive utilization of total quality management (TQM) procedures intended to attain the objectives of the firm.

Service quality as a theory had generated significant deliberation concerning its description and calibration with no agreements being reached. The tool that has gained much confidence in trying to put into use service quality is the gap framework of service otherwise known as SERVQUAL (Sultana & Das., 2016). An abstract scheme for the

SERVQUAL model to estimate client dispositions of service quality and streamlined it thereafter. In the view of Khan & Fasih (2014), despite this model being initially created for the purpose of putting it into use in the confines of the financial services field, it has been harnessed to assess those aspects of services that bring about satisfaction in other service provision industries for instance, hospitality department, telecommunications, and medical care. SERVQUAL relies on the premise that service quality is crucially dependent on the gap between expectations and perceptions of the customer, and the service delivered (Carrin & Chris, 2011).

This study is modeled on SERVQUAL Model, the Pecking Order Theory and Resource Based Value Theory. Pecking Order Theory holds that the correct mix of the leverage plays a major role in the growth of the firm. The correct mix of Healthcare Financing strategies, which comprises of Out-of-Pocket, Community Based funding, bank loans, Social Insurance, Private Insurance and Taxes and any other mix that might be identified at the course of the study would as well influence the implementation quality healthcare as per the Constitution of Kenya 2010, Vision 2030, and the SDGs in the health sector accordingly.

Though the Pecking order Theory has been adopted for this study, it does not entirely address the study objectives. The theory addresses the preferred leverage mix towards growth of the firm, which may be more applicable to the profit-making firms than the non-profit-making organizations. The healthcare providers in this study are a mix of profit-making and non-profit-making institution. However, pecking order theory has proved to be more appropriate to this study as compared to the other theories because of the most appropriate mix approach of financing being sought by this study.

In accordance with Mweru and Muya, (2016) Resource Based viewpoint theory (RBV), states that the assets that an establishment owns is the first indicator of its productivity. The resources may stay dormant until the company harnesses its capacities, hence bringing about a lasting competitive edge. The RBV capitalizes on the wherewithal and capacities that the firm has as a means of fostering tenable combative edge. Competitive edge only comes about when there is a situation of resource heterogeneity and resource immobility (Pankaj and Madhani, 2010).

2.2.2 Healthcare Service Quality

Based on David, (2009), success in the performance of service providing industries is considerably influenced by the quality of their provisions since it plays a role in the firm's effectiveness as well as satisfaction of clientele. Quality control should be a fundamental component of the service firms' effectiveness. The healthcare sector is a good example of the service firm that is keen on the significance of quality in line with medical care. (Globenko & Sianova, 2012) attest that as a result of its intricate nature, quality oversight in the healthcare field is indeed a tough undertaking.

Going by Donabedian, (1980), The Nordic view elaborates service quality as having two facets: technical and functional quality. The former can be explained on the lines of technical precision of the medical processes and examinations while functional quality denotes the way in which the service is offered to the patients (Donabedian, 1980). The European perspective ignores the significance of physical surrounding of the service exchange. In America, their philosophy regards service quality as the variation existing between the whole gap in the expectation and disposition of service provision (Parasuraman *et al.*, 1985, 1988, 1991, and 1994). Furthermore, in line with

the American perspective, service quality bears five facets; responsiveness, tangibility, reliability, empathy, and assurance (Khambhati & Kumar, 2018)

In a study carried out in Iran concluded that Quality in medical care is a result of collaboration between the patient and the medical care provider in a conducive setting. Service quality in medical care is reliant upon personal aspects of the professional and the patient in addition to aspects related to the medical care establishment and the vast surrounding. Disparities in both external and internal elements for instance presence of facilities and liaison and unity among medics impact the quality of care and client issues. An array of theoretical relationships can be inductively inferred from the preceding analysis (Mohammad, 2014)

2.3 Theoretical Foundation

The theories guiding the study are the Crosby's Theory, Pecking Order Theory and Resource Based Value Theory.

2.3.1 The Crosby's Theory

The theory is much like Deming's in the sense that Crosby believed that money spent on quality was money well spent. The theory is guided by four crucial absolutes of quality management. The four absolutes are: (a) Define quality as adherence to requirements (b) Prevention is the best way to ensure quality (c) Zero defects is the performance standard for quality and (d) Quality is measured by the price of non-conformity (Suarez, (1992). The theory is applicable in this study given that the study just like the theory is trying to establish the impact of funding in delivery of quality services in healthcare.

2.3.2 Capital Structure Theories

Capital structure theories which entail, Pecking Order Theory, Modigliani Miller Theory (MM Theory), the Tradeoff Theory and Agency Cost Theory. These theories have general assumptions and specific assumptions to each of the theories. The general assumptions of these theories are that: Only two Financing resources: equity and debt, the company can adjust the level of upper hand by either vending the shares and retiring debt or debt issuance and redeeming equity, it is an assumption that all stakeholders bear a similar speculation concerning future proceeds, the overall funding stays unaffected, the overall company resources are insured and have no irregularities, the firm has perpetual life and the ratio for dividend payouts is equal to 100%,there's no growth projection on operating profits(EBIT), there is no corporate tax, corporate risk is steady throughout and is expected to unaffected by financial contingency and its capital structure (Milton & Raviv, 1991). Though the three theories in capital structure are reviewed, the most appropriate theory for this study is that of Pecking order theory which stipulate that firms give precedence to their financing reserves (from internal financing to equity) depending on the financing expense, being impartial to garner equity as a final solution.

2.3.2.1 Pecking Order Theory

Pecking order theory was first postulated in 1961 by Donaldson, it was then adjusted by Stephanie in 2015. It declares that firms give precedence to their financing reserves (from internal financing to equity) depending on the financing expense, being impartial to garner equity as a final solution. Therefore, internal resources are utilized at the start, after which debt is issued and when it is unreasonable to continue issuing debt, equity follows. Pecking order rational begins with asymmetric information since superintendents unlike external stakeholders, have more insight on their firm's

opportunities, value and contingencies. Asymmetric information influences the choice between external and internal financing also between the issue of debt or equity. There exists a pecking order for the financing of new projects.

Asymmetric information befits the case of debt over equity since the issue of debt shows the board's conviction that a venture is lucrative and that the price of the current stock is underrated (if it was overvalued, the issue of equity would be valued). The issue of equity would demonstrate little conviction in the board and that they find the share price is over-valued. Therefore, a reduction in share price would likely occur from an issue of equity. Nonetheless, this is not the case for telecommunication companies where the issue of equity is desirable because of the exorbitance of debt issue since assets are intangible.

In business funding, pecking order theory stipulates that the cost of money rises with information failure. Capital is drawn from three reservoirs: new equity, debt and internal capital. Firms map out their sources of capital, being impartial to internal financing for starters, then debt and finally equity as a final option. Therefore, internal funding is initially utilized, upon depletion, issuance of debt occurs; finally, when it beats logic to issue further debt, they issue equity. This school of thought insists that establishments follow a pyramid of capital reservoirs and precedence is given to internal funding if it is present, whereas when there's need for outside financial backing, debt is given precedence over equity (equity translates into sale of shares hence 'bringing outside ownership' into the institution) Therefore, the choice made by a company on the form of debt is a portrayal of its need for outside funding.

This theory is applicable in this study since the researcher is trying to establish the impact of Modigliani-Miller each source of funding on the service quality in healthcare.

The findings will then assist the healthcare service providers to know which source has more impact on improving service quality and hence base their decision on sourcing of funds and prioritization of each funding strategy based on its impact.

2.3.2.2 Modigliani Miller Theory

(MM) suggestion is that a company's monetary worth is not reliant on its capital structure, but lucrativeness (Modigliani and Miller, 1958) is proverbially an implementation to the financial sector of the principle that money is neutral Glickman (1996). Indeed, it is bedrock of contemporary corporate finance. At the core, the hypothesis is an insignificant suggestion: The Modigliani-Miller Theorem presents situations under which a company's financial moved fail to impact its worth. That which is presently known as the Modigliani-Miller Theorem entails for different outcomes from a series of write ups (1958, 1961, and 1963).

The first suggestion confirms that under specific cases a company's debt- equity proportion fails to impact its market worth. The second suggestion confirms that a company's leverage bears no influence on its measured average cost of capital (that is the cost of equity capital is a linear function of the debt-equity proportion). Suggestion number three which reveals that firm market worth is not linked to its dividend protocol. Suggestion number four confirms that those with equity are unaware of the company's financial conduct (Villamil, 2019). Based on Frenzel (2013) the theorem generated an unreal world free from taxation, transactional fees, bankruptcy liabilities development prospects, Clear cut information processes between internal and external stakeholders and variations in risks between different companies and persons. They demonstrated that under such ideal scenarios funding is unnecessary for the affluence of stakeholders

and there exists no ideal debt to equity ratio. Nonetheless, the chain of demystifying assumptions has much at times received criticism by publications that followed.

It went on to indicate that while a majority of current works concerning capital structure theory, for instance Ishikawa (2012), only give a short outline of the theory in their introduction, one paper by Murray (2015) intentionally investigates the consequences in his literature review and came to a resolution that the first M&M suggestion outlines that the total firm value and the stakeholders revenue are consistent and cannot be enhanced through financial decisions- regardless of whether the company's leverage was 99% or 1%.

2.3.2.3 The Tradeoff Theory

Trade-off theory according to Serrasqueiro, & Caetano, (2015) describes the theories found in the same category and are connected. It is employed by various scholars to demonstrate a group of linked notions. In all these hypotheses, a director managing an establishment assesses the different repercussions and pros of substitute plans with an edge. Most of the times it is assumed that an internal remedy is arrived at so that marginal benefits and expenses are levelheaded. The Trade-off theory concedes that funds accumulated by companies consists of both equity and debt, the notion claims that there is a merit to debt funding because of their tax merit, nonetheless some expenses are incurred due to bankrupt and non-bankrupt as well as debt costs. In addition, the hypothesis declares the marginal benefit of debts rise with level of debts and the marginal cost of debts rises with a rise of debts, as such a reasonable company will take maximum advantage of the trade off point to establish the debt extent and equity to back its functions (Chen, *et al.*, 2018).

2.3.3 Resource Based View (RBV) Theory

This study adopted the resource-based view (RBV) theory proposed by Wernerfelt (1984) to underpin the moderating variable. The proponent of the theory considers the firm's resources against a four characteristic criterion namely Valuable, rare, inimitable and non-substitutable (VRIN). This theory explains how hospital resource and characteristics such as bed-capacity, age of hospital and type of hospital affect quality of service among healthcare service providers.

A resource is any item that can be classified as an advantage (Barney, 1991; Wernerfelt, 1984) or flaw of a particular corporate establishment. Such entail machinery; efficient procedures and organizational processes, business contacts, knowledge, capital, brand names, (Wernerfelt, 1984; Barney, 2001), skilled staff, firm attributes and information (Barney, 2001), assets such as factory building (Mills, Platts & Bourne., 2003; Barney, 2001).

(Das & Teng, 2000) state that the Resource-Based View emphasizes on the internal elements of a company and implies that there exists an association between a company's gathered assets and its combative approach. Based on Barney (2001), a company's well utilized wherewithal and capacities are instrumental in ensuring it has a steady combative edge. In a nutshell, the Resource-Based View elucidates the conclusion by Das and Teng (2000); "what a firm possesses would determine what it accomplishes" Based on Das & Teng, (2000), companies have the ability to acquire wherewithal to get competitive edge by the help of conscious affiliations. Wiklund, & Sheppard (2003) remarks that the wherewithal provision is fundamental to the company's longevity. The capacity manufacturing industries have to oversee their supply as well as their distribution chain see to it that they are well covered with wealth

to execute their responsibilities. Through Resource-Based View, many rationales responsible for the development of strategic unions can be identified. The justification behind the creation of strategic unions are; according to (Elmuti & Kathawala, 2001); new technology and markets), significant technological information (Hagedoorn, Letterie, & Palm, 2011), opportunities for technological transfer (Elmuti, Abebe, & Nicolosi, 2005, gaining access to the resources (Al Khattab, 2012).

In the view of Todeva & Knoke, (2005); Elmuti & Kathawala, (2001); Al Khattab, (2012) companies will come into strategic unions as a means to gaining competitive edge, interdependence (Van Gils & Zwart, 2009) in addition to new proficiencies and competencies (Todeva & Knoke, 2005; Al Khattab, 2012). Other reasons are instigating combative positioning (Chen & Tseng, 2005; Zineldin & Dodourova, 2005), broadening marketing operations (Chen & Tseng, 2005) as well as the expanding worldwide combativeness and product breakthroughs (Elmuti, Abebe, & Nicolosi, 2005). Other circumstances under which companies would enter into strategic unions is to improve their corporate successes, performance (Al Khattab, 2012), image (Chen & Tseng, 2005), distribution protocols alongside revenue Zineldin & Dodourova, 2005) which has a high chance of growing once the total costs go down.

Since the study is trying to establish if some of its characteristics such as Bed capacity and its type (also considered as their resources) could play a role in enhancing the quality of healthcare services provided in the facilities, the Theory was the most appropriate since it considers the firm's resources against a as advantage in its competitiveness.

2.4 Models Guiding the Study.

2.4.1 Service Quality Models

Several frameworks have been established in publications as ways of assessing service quality. Some of these include performance only strategy, attribute importance approach, functional and technical dichotomy strategy, expectancy-disconfirmation strategy, and service quality versus service satisfaction. According to Sinha, *et al.*, (2019) the expectancy- disconfirmation framework is centered on sighting customer expectation against their actual observation. It weighs the service effectiveness with the speculations of the client that are evaluated after experiencing the service.

The performance-only approach assesses service quality by enquiring from the customers about their level of satisfaction with the various features following a service encounter (Bulan & Sanyal 2011). The technical and functional dichotomy strategy pinpoints two elements that contribute to customer satisfaction: functional quality that is linked to the affiliations between the client and the service provider for instance speed of attendance, courtesy and usefulness while technical quality of the commodity which is reliant on product aspects like security, physical attributes, security (Juran 1988). Clients more so than not fall short of knowledge on the technical parts of a provision and as such depend on functional quality to form perceptions of service quality (Deolitte 1993).

Service quality against service satisfaction model majorly concentrates on two interconnected elements of service; the over-all assessment that investigates overall quality and the transition-specific assessment that investigates particular attributes of quality. This strategy connects perceived quality when the service took place or right after it and general satisfaction with the provision. The attribute importance model is

centered on the relative weight on the value the client attaches on features discovered to be connected with service satisfaction. (Jacobs *et al.*, 2017).

Cooper and Schindler (2013) formulated SERVPERF (service performance) which undermines the expectation and analyzed service quality perceptions by appraising the general attitude a client has regarding the service. Of all the service quality assessment models, the most recognized and adopted framework in several sectors is the SERVQUAL (service quality) model developed by Parasuraman *et al.*, (1988).

Established by a sect of American scholars, Parasuraman, Valarie Zeithaml and Len Berry, in 2006, the SERVQUAL (service quality) model illustrates the major elements of superior quality service. Initially, the SERVQUAL writers came up with a list of ten indicators of service quality: tangibles, access, courtesy, reliability, communication, credibility, security competence understanding and responsiveness. Extensive research brought together interlinked variables and scaled down the indicators into five integrated dimensions: empathy, reliability responsiveness, assurance and tangibles-forming the acronym RATER as the tools for analyzing service quality Parasuraman *et al.*, (1988). The SERVQUAL model examines client expectation and service quality perceptions by recording the disparity between experience and expectation.

Establishments employing SERVQUAL to analyze and administer service quality distribute a survey that assesses both the client expectations of service quality in accordance to the five dimensions and their experience of the service they obtained. In cases where the expectations of a client supersede their experience of the provision, service quality is considered poor. Aside from acting as a measurement framework, SERVQUAL also acts as an administration framework. The writers of SERVQUAL found five gaps that may result in poor service quality experiences for customers.

2.4.2 Finance Models

Cash Management Models are some of the models that have been proposed by Murray and Goyal (2009) among others. Baumol was the pioneering expert to develop an official framework of cash management. This framework harnessed the economic order quantity (EOQ) to cash. The Baumol framework helps firms to identify their preferred level of cash balance under guarantee. The Baumol framework for cash management theory depends on the transaction between the interest forfeited by holding onto one's wherewithal in the form of non-revenue generating money and the financial resources offered by holding funds (the capacity to effect trades. The crucial determinants for capital include nominal interest and the level of net income, that is correlates with the measure of transactions wished for and to a fixed expense of distributing one's wherewithal between interest gaining assets and liquid capital. It makes assumptions that cash flows are certain and constant and that inflows are regular and periodic. As a model it is easier to use but generally more simplistic in its outcomes.

Mills (2015) created a cash balance framework to manage cash influxes and outflows with daily erratic shifts. In the Miller-Orr model both cash influxes and outflows are excluded. It's a premise by the framework that the dispensation of day-to-day net cash flows is ordinarily distributed. The model's terms of operation are upper (H) and lower (L) control margins alongside a target cash balance (Z). The cash balance has freedoms of mobility between H and L. The only circumstance under which a company is to make a cash transaction is when the balance gets to (H), when the company purchases H-Z marketable securities or if the cash balance attains (L), in cases where the company sells Z-L marketable securities. L is adjusted depending on how much cash shortage is ready to handle. The price at which marketable securities (F) are procured and sold are presumed to be constant. The proportion forfeited per period of retaining cash (K) is

equivalent to the day-to-day cost of money of marketable securities. Different from Baumol's model, the count of trades per period is an erratic variable that shifts from time to time, depending on the sequence of cash influxes and outflows.

The considerations of the Miller-Orr model are that the director must meet four requisites: Set the inferior margin for the cash balance; Predict the standard deviation of day-to-day cash movement; Establish the cost of money and predict the trading expenses of procuring and vending marketable securities. Murray & Goyal., (2015) formulated an alternative strategy to cash management that is grounded on maximum allotment of capital between marketable securities and cash balance. He confers that to date cash flows can be manipulated and persist in a repetitive manner, the financial administrator can speculate the cash requirements the planning period and invest the amount considered surplus.

2.4.3 Moderation Model

According to Compton *et al.*, (2014) moderator is a variable that specifies conditions under which a given predictor is related to an outcome. The moderator explains 'when' a dependent variable (DV) and an independent variable (IV) are affiliated. Moderation suggests an exchange outcome, where bringing in a moderating variable shifts the direction or extent of the linkage between two variables. A moderation effect for instance could be (a) Enhancing, where heightening the moderator would raise the result of the predictor (IV) on the outcome (DV); or (b) Antagonistic whereby, an increase in the moderator would undo the impact the predictor has on the outcome or (c) Buffering, where a rise in the moderator results in a reduction on the impact the predictor has on the outcome.

Variable M is inferred to moderate the effect X has on Y if X's effect on Y is reliant on M. Moderation can also be referred to as interaction. This means that if M moderates the effect of X on Y, Then X and M interact in their impact on Y (despite their being some cases where the variation between moderation and interaction is expressed, that's not the case here). Analyses that measure an interaction or moderation theory concentrate on assessing the risks or effects boundary conditions. In accordance with Hayes and Montoya, (2017) determining such boundary conditions, the conditional nature of an event is fundamental in both applied and basic research. Cutting across fields, scholars are acknowledging the benefits of incorporating more advanced methodology into their analytical toolkits. Cutting-edge statistical models enable the analysis of intricate research hypotheses that may estimate accurately the cross dimensional actuality from which information is retrieved, allowing for instance the inquiry of imbalanced growth forecasts of behavioral development, nested data structures such as individuals within schools or multivariate processes that underlie or modify other bivariate relations. The latter category of frameworks, at times denoted as third variable effect models, a special keenness has been out on the model since it permits a comprehension of the aspects that may change or discern the linkage between the two other variables. Nonetheless, the usefulness of such techniques is crippled in the case where their execution fails to adhere to best practices now championed in methodological works. Third variable effects describe the linkage between two other variables and are able to elaborate the basis of the affiliation or under what conditions they are related (Fairchild and Mackinnon, 2014).

2.5 Financing Strategies and Healthcare Services

Based on Mills (2015) there is tension being experienced cross cutting through the industrialized world to control the increase in costs on personal medical care provisions,

despite particular strategies being contradictory. The funding framework which has changed drastically within the past three decades in the United States had entailed an intricate web of private and public duties. This system differs considerably from the extensive public funding schemes that occur in several European nations. To have a better comprehension of the possible effect of certain shifts that are likely to happen in the U.S framework, one can take a glance at the prevailing largely publicly sponsored health care schemes in European nations. The European states deliver a comprehensive model as they experience the same financial strains as discovered in the U.S, however each state has tackled such strains in various manners (Tam, *et al* 2017).

In developed nations, medical care falls under four criteria: national health services (NHS), traditional sickness insurance, and national health insurance and mixed. From an economics viewpoint, the main disparity among these medical care schemes is on how financial contingencies are shared among the client, the insurer and the medical care provider. (Nolke *et al.*, 2015). Cites Germany is an instance of a health care system that is elucidated by the socialized medical insurance program, illness funds. Close to 8% of German citizens bear social health insurance, 10% having private ones and the extra 2% are under public programs. The health scheme in Germany is built on state-required funding by employers and staff. The sickness capital is sponsored by remittances from management and staff depending on a proportion of salary received.

Staff insurance by a sickness funds covers all dependent family members. The sickness funds settle on a compensation rates with the individual health centers and the union on the insurance physician. Kinyanjui *et al.*, (2015) states that Ambulatory benefit is offered by fee-for-service, office-bound physicians. Humba, (2005) believes that private medical care insurance markets are crippled by two roots of technical incompetence which can be managed or averted by public funding. The fixed charges

to a private insurer of offering insurance (for instance, the expense that comes with establishing risk-rated premiums) which are constant regardless of the number of policies sold, create economies of scale in insurance delivery, effecting in several environments sustenance of combative markets for insurance if companies are to run at technically competent magnitudes.

Furthermore, Deming, (1986) posits that private insurance structures with numerous establishments are technically flawed since they demand a myriad of management costs not available in public insurance programs (such as, marketing, rate-setting, claims management)

According to Revill *et al.*, (2010), projections for instance, imply that management costs in the private multipartite US system cover upto 19-24% of medical care expenses whereas in they meet only 8-11% in Canada's publicly sponsored scheme. Humba (2005) implies that allocate inefficiency within private insurance markets that results from informational imbalances between insurance vendors and customers supplements to a greater extent the idea that public financing is critical to attain wide access to medical care.

In private insurance markets which create risk pools through deliberate recruitment, informational imbalances between insurance vendors and insurance clientele can result in risk selection. Risk selection comes about when insurers critically admit low-risk persons (cream-skimming) or when high-risk persons critically look out for better insurance (adverse selection). Adverse selection as a form of risk collection, has the capacity to cripple effort to maintain private insurance markets. As a result, ready customers able to procure insurance at a cost that matches their risk status are barred since the nature of adverse selection cripples the sustenance of insurance market.

While risk-adjustment premiums are known for their potential of minimizing such risk selection, it is close to impossible to risk-adjust premiums adequately to reduce risk selection. Hsiao, *et al* (2014) infers that globally, publicly financed insurance that guarantees all parties within a jurisdiction ultimately averts risk selection. Irregularity of data between health care professionals and patients manifests an extra premise for public financing as well as first-dollar insurance with no patient sharing in costs. Persons regularly fall short of knowing what is happening within their bodies and once given a prognosis, the kind of medical care provision they require to aid their medical predicament.

Humba (2005) attests that moral decadence cripples both publicly and privately funded insurance schemes, however public insurers with one payment system of finance possibly have more successful policy leverage in addition to counteracting capacity to best regulate the different types of supply-based moral decadence. Deming, *et al.*, (2019) confirms that informational imbalances between patients and medical professionals also prove that distributing costs on patients will be counter-productive resulting in suboptimal health care consumption. The fact that patience frequently fails to differentiate between needed and unnecessary attention, that cost-distribution is impartial to one's purchasing power, and that the needy, on average have much immediate needs for attention goes to show that cost-distribution results in a drop in both needed and unnecessary care, with the likelihood of considerable health consequences (Humba, 2005).

Childcare, family planning, antenatal care and treatment for sexually transmitted infections are broadly accessible in not less than two-thirds of health care amenities in Kenya. Nonetheless, not more than 30% of the nation's medical care amenities offer

provisions for child delivery. Medical benefit for ailing children and malaria treatment is almost globally unavailable. 85% of amenities presently provide services for provisional alterable family planning means, a number higher than the 75% in 2014. Barely few of the amenities not more than 8%, offer either male or female sterilization; nonetheless care for child delivery has failed to rise since 2014. According to GoK, (2016) Despite 8 out of 10 hospitals, maternities and health centers being able to offer delivery care, this provision is only accessible to 21% of dispensaries and only 4% of clinics.

Merely 30% of amenities provide delivery care and merely 23% of the provisions offer delivery care day and night. Not even close to two-thirds of such amenities have sufficient infection mitigation and all materials and supplies necessary for healthy deliveries. Potentially critical provisions are scarcely available. Not more than 5% of health structures, more often maternity and hospitals offer caesarean sections. On a more positive note, close to 50% of structures currently have a carriage provision in case of maternal contingencies, a significant rise from 27% in 2014. Kenyans now have better reach to HIV testing, antiretroviral therapy (ART), as well as prevention of mother to child transmission (PMTCT) services in contrast to 2014.

At the moment, close to three quarters of health care structures are able to conduct HIV testing, this is a number higher from 2014 which was 37%. The modest PMTCT provision entails preventive treatment using antiretroviral prescription for mother or infants, has also gone up, regardless of the rise being minimal' from 13% to 19% in 2014. ART for infants and adults with HIV infection is found in 17% of centers, this doubles the record of 7% in 2014 (Kimani *et al.*, 2012).

The ever-changing system for financing and compensation for medical care provisions is the secret to streamline the delivery of medical care in every health care framework. Evans *et al* (2013) postulates that the kind of services offered as well as the institutional tactics to providing services are strongly affected by the health care payment means. According to Humba (2005), third-party players try to reduce their expenses and regulation for their budgets as a means of mitigating financial risk linked with procuring health care services.

2.5.1 Equity Financing and Service Quality

Financing is the tactical combination of capital for a specific rational or undertaking. It entails numerous sources of financing. These various sources of healthcare financing are directed by financing agencies, which are organizations that get money to fund or procure health commodities and provisions (Kimani *et al.*, 2012). Financing agents include ministries, NGOs, NHIF, households (out-of-pocket-payments), private insurance firms and donors. Close to 57% of the wherewithal were directed through the private industry in 2015, a rise of 7 percent by 2016.

The World Health Organization challenges countries that the way health systems are financed are a critical determinant for reaching universal coverage. In Kenya, a study by (Okungu, *et al* 2017) showed that the current Kenya health financing system does not meet the key requirements for universal coverage including income and risk cross-subsidization. The study also shows that the sector is largely underfunded and healthcare contributions are regressive (i.e. the poor contribute a larger proportion of their income to healthcare than the rich). Thus financial strategies play a critical role in shaping the provision of quality health care services in any hospital. This study explored

how equity financing, debt financing and network financing affect hospital service quality. An understanding of these financing strategies is key.

In publications equity financing strategies have been elaborated as the sale of ownership shares in an effort to increase capital for running the establishment. Daniel *et al.*, (2010) attests that equity financing is an enterprise capital financing technique that doesn't call for payback and neither bears interests on money raised, it however gives stakeholders a sort of proprietorship in the establishment. Kongmanila and Kimbara, (2007) explain that the aforementioned funding technique can also entail a source of investment, property of the omission donations of the Board, deferred income, the contribution of partners, and income flows of the establishment. On the other hand, Rosli *et al.*, (2010) elaborates that sources of debt funding is a technique of debt money that entails interest-linked tools and is made up of several reserves for instance secured loans, family/acquaintance loans, credit cards bank loans and other forms of credit (Fraser, 2005).

Some of the deciding factors that might drive hospitals to explore equity financing include cases where a hospital's creditworthiness is an issue; in cases where hospitals are confident that they could generate a healthy profit margin and the hospital ease of sharing decision making with equity partners. Cited advantages of equity financing are the less burden of paying debts providing opportunities to channel more money to grow the hospital, forgotten credit issues, and opportunities to learn and gain from partners. For purposes of this study, any funding where the client has a stake in is considered as equity financing strategy which, includes funding through ex-chequer, cost sharing mechanisms and insurance.

Investigating equity financing and organization performance; Scholars like Awunyo-Victor and Balcon (2012) recommend relying more on the internal generated fund. Contributing to the empirical literature. Audu and Anafi (2013) used a panel data methodology showed a positive relationship between equity financing on its profitability of a list of a bank in Ghana stock exchange from the period of 2005 to 2012 using the equity finance as its foundation. The study latter recommend the full utilization usage of resources at their command in order to increase profitability in the Ghana listed bank. Oghenekohwo, *et al.*, (2018) revealed that influence on equity finance on the organization performance is negative which proxies by the return on the investment and on the return on asset. Recommendation where made that the organization should adopt less debt and more equity while financing the business activities, also establishment of an organization to point that the weighted average cost of capital is minimal.

Other studies on equity financing and organization performance reveals the Proof of mixed relationship Olokoyo, (2012). It reveals that an organization using equity finance in terms of leverage have a significant negative relationship with the market performance measure (Return On Assets) and that the equity finance measure have a positive and highly significant relationship with the market performance measure (Tobin's Q). The study established that Nigeria Organization are partially financed by equity capital or a mix of equity capital and short-term debt. The study reveals that the maturity structure of debt affects the performance of organization and also the size of the organization has significant positive effect on its performance.

Velnampy and Niresh (2012) reveal a negative relationship between equity finance and profitability except the association between significantly negatively correlated with net

internet margin, debt to the total fund is found to be significant negatively correlated with the net profit and net interest margin. It was revealed by the author that the outcome of the study was to guide organisation, lead creditors and policy planers to formulate better capital structure, better equity financing and capital structure policy decision.

Chechet & Olayiwola (2014) reveal the negativity of the debt ratio to the profitability and equity. These have positive effect on organization performance and their profitability. More so, there is wisdom conventionally. Recommendation was made that organization experiencing financial issue and willing to raise funds for their expansion and their operation should go and access equity and if it is not enough, they should acquire little debt. According to Hassan, *et al.*, (2014), the results also revealed a significant negative effect of equity finance on (ROA). However, there was not a concrete evidence of an effect on the equity finance on organization performance as measured by ROE and Tobin's Q and there was conclusion that equity has a negative impact on the organization performance. The hypothesis pecking order was in consistence with the empirical studies turn out to be inconclusive. It is a bit ambiguous may be due to the theoretical framework difference and the method of its estimation. Some researchers are over-emphasized on the models which include the control of variable e.g. age and size of the organization. Also, there factors are known to influence the organization performance and cannot be classified or referred to as one of the elements of equity financing.

Ex-Chequer Financing and Service Quality

The resounding 43% was directed through the public field with the MoH as the grand agent overseeing 34% of the total wherewithal. The recipients of the funding through

financing agents form part of an extensive array of amenities both public and private. Low synergism and absence of transparency between financiers, recipients and funding agencies have proved disadvantageous to the GOK's adoption of comprehensive health care that are associated to give precedence to medical care needs. The MoH, inefficient running of available health financing is one of the major setbacks towards reaching the Sustainable Development Goals (SDGs) for healthcare.

With regard to Ex-chequer financing, critical components following the promulgation of the Kenyan constitution in 2010, that affect healthcare financing in Kenya include: (a) devolved funds for healthcare, (b) affirmative financed treatments and (c) government development funds.

Devolved Funds for Healthcare:

Governments are instrumental in health care funding by gathering the required wherewith through public allocations and other ways of donating, pooling funds allotted to health advancement, managing the fund allotment protocol and procuring health provisions from specific professionals (Tam 2015). Health ministries are allocated with the responsibility to safeguard balanced access through enhancing financial risk mitigation, through removing obstacles to access by the destitute and marginalized communities, also by making sure that funding for health care is an all-income group and unbiased involvement (Kimani *et al.*, 2013).

Healthcare funding is turning into a significant branch in health schemes since the internal disparities and those between nations with regards to access rise due to financial setbacks and unavailability of proper social protection (Kimani *et al.*, 2013). A key

determinant of the government's dedication towards health is the size of state's budget allotted to the whole department.

In the year 2016, presidents in African nations convened in Abuja and pledged to allot not less than 15% of yearly budgets to the health industry. Government expenditure on health in Kenya merely hits half the target pledged in Abuja and has since been reducing, furthered by being the least in East and Southern Africa. Jacobs *et al.*, (2017) contend that despite very few exceptional African states that have attained the numbers raised in Abuja, a majority of these states are slowly progressing towards the goal.

The WHO mandate on Macroeconomics for health brought forward an argument seeking more capital ventures in health, as a means of reaching the aggregate US\$ 34 per capita cost required to avail health care to the whole society. The Kenyan government health expenditure per capita has been consistently rising from US\$ 5 in 2015/2014, to US\$13.4 in 2015/2016. This increase shows in definite terms of the state's allotment to the health industry. In a case where money from patrons is integrated into the research, total health cost per unit rose considerably to US\$ 27 in 2015/2016 (GoK, 2016).

Even though the mandate suggested that emergent nations get assistance from sponsors to hit the US\$ 34 mark, the rise in per unit expenditure on health in Kenya is mainly as a result of an influx in donor backing for HIV/AIDS. Were it not for the inclusion of HIV/AIDS linked funds in the study, per unit expenditure would rank considerably lower. According to Deolitte, (2015), Donor funds should act as a backing and not a substitute to state funding regardless of the fact that they have considerably played a part in effecting better access to health care in Kenya, more so for people living with HIV/AIDS.

Kenya health sector (2016) recommended that the Government of Kenya needs progressively focus on raising their proportion to the health industry to avoid serious obstacles just in case donor capital become greatly subsidized or discontinued. Several options can be exploring to raise the size of government budgetary cake given to the health department (RoK, 2016). Initially the state can basically raise the share of budgetary cuts to health in a way that leads to a reduction in the proportion allotted to various fields. While this may be considered as direct, it may bear some setbacks, not to mention resistance from other sectors that are also advocating for more resources (Deolitte, 2015). Odek, (2011) opines that several factors impact health outside the health ministries, for instance, housing, education, and agriculture. Deducting the proportion allotted to these fields has a possibility of affecting the health condition of the general public.

However, there is need for some deliberations to be tabled to raise the share of health expenditure without impacting the sectors linked with health. In addition, the government could possibly channel efforts towards raising the revenue gathered through reinforcing corporate tax as well as tax on personal earnings, and thereafter donate a huge percentage of the high revenue to the Health department (Humba, 2005). It is of interest that the government of Kenya has since registered supplements for taxation; however, this fails to translate into any recognizable upticks to the proportion of state budget, allotted to health. Thirdly, one way of making sure that a particular share of government proceed is secured for the benefit of the health ministry is by earmarking some levies for healthcare, by doing this, the budgetary allotments raise to the appropriate degree needed to offer the ultimate health benefit package (Deolitte, 2015).

Affirmative Financed Treatments: Even though private and public sectors provide health care services, the top health care service provider in Kenya is the National government (Ndetei *et al* 2013). Kenya's health scheme which is primarily financed by taxes has ultimately undergone various health funding policy reforms. They contend that akin to most emergent nations, healthcare funding protocol as in Kenya has passed through three continuous stages; Firstly, the stronger strategy was contingent on free health care access with a keen interest on the need of offering fundamental care to everyone. In the second stage came up client charges while stressing on availability of fundamental care and made an attempt at integrating health programs into district-level medical care facilities. In an assertion by, Yamin & Boulanger, (2014), it was stated that the core business of Millenium Development Goals (MDGs) and Sustainable Development Goals (SDGs) is to develop sustainable health care.

A majority of guidelines have taken a negative toll on health care delivery by the government; the cost distribution (user charges) strategy pioneered in 2016 ranking top as the most disputations. This goes to show that health funding in the country has undergone various barriers not to mention insufficient financial backing (Deolitte, 2015), there has been a give and take association between health conditions and destitution. On the flip side, poverty is a crucial driving force of deprived health conditions while concurrently poor health status plunges the underprivileged deeper into destitution. This suggests the Kenya's experience of significant financial constraints to obtaining health care.

The SDGs agenda stress on the need of establishing insurance systems that have gain strong publicity as a way of attaining global health care. Adjustments in health care have transferred the issues of health care funding from the state to clients, resulting in

a negative effect on health care pursuit. Despite the efforts by the NHIF programme to enroll informal sector workers, high unemployment rates in Kenya pose a major threat to this drive.

According to Anderson *et al.*, (1997), financial administration in service firms has proved challenging and destructive to other operations that play a part in service provision. They recommend an “enlightened” strategy to funding in service firms. This entails more involving and definitive strategy where instead of acting as a barrier, it is instrumental to sustained liquidity, cost systems, strategic planning, quality control and keeping administrative decisions private to external parties (Tsang and Anthony, 2016). Sultan and Simpson, (2000) emphasized the necessity for differentiating ‘good costs’ that enhance institutional capacities and quality service delivery from ‘bad costs’ that lengthen bureaucratic procedures therefore causing a hindrance to effective service provision.

Government Development Funds: Wang & Pielemeier, (2012) describes the developing Nations health financing framework as very fragmented. Fragmentation is the presence of various separate financing mechanisms and a wide array of health care professionals in a state. It occurs when pooling of money gathered from various financing techniques doesn’t take place and citizens from various socioeconomic groups are insured under various systems. OOPs demonstrate the major example of fragmentation in the Kenya health scheme. Several sorts of fragmentation are represented by private insurance, NHIF, donor backing and Community Based Health Insurances (CBHIs).

The NHIF majorly ensures individuals employed in the formal sector; private health insurance firms cover the high economic classes, whereas almost all CBHI partisans

are small-scale farmers. There exists a very stringent income cross-subsidy within CBHIs as well as private health insurance as their members belong to the same income group, and they are often the most poverty-stricken. For instance, every single one of the 32 CBHIs in Kenya operate distinctively, this brings about a very limited pool with little capacity to cover a marginalized group (RoK, 2014). Plans have been laid out to incorporate all CBHI systems in Kenya, it is however implicit what elements will be directed under the bigger pool.

Regardless of the NHIF's huge number of members, these funds are not pooled together with CBHI donations or with tax financing. The county governments also amass tax and finances 100 health centers throughout the country. Funds from the county government are not pooled with tax funds allotted to the ministries in the health sector. Donor funds also express fragmentation: a majority of projects run autonomously, and it is quite possible to find various donors supporting identical undertakings within the same locality, however this is with minimal collaboration in the line of financing, service provision and functions. Kamau & Njiru (2014) states that sponsoring particular health activities independently compromises the perpetuity of health financing.

The WHO has championed for efficient channeling of donor capital to make sure that outside capital are in line with state precedence and within the wider goal of global coverage. Based on Deolitte, (2015), not pooling donor wherewithal in Kenya encourages imbalances since little or no regard is given when the state allotments are being disbursed, more so where areas with minimal disadvantage enjoy from considerable donor backing as well as attaining a huge portion of government financing

Fragmentation is not a new phenomenon in Kenya. Health schemes in underdeveloped nations have been largely fragmented during the past eras. Several nations like

Thailand, Ghana Kyrgyzstan are making head way in attaining global coverage under a framework with minimal fragmentation. Other states such as Tanzania and South Africa are still undergoing huge reforms that will enhance unity and global protection (Ranson *et al.*, 2016).

Several scholars illustrate the importance of integrating health care financing schemes if the goal is to attain global coverage. They heed that financing need be tackled from a comprehensive viewpoint that is guided by policy goals as opposed to enacting piecemeal changes that are centered on each well of financing autonomously and in this was champion segmentation along with fragmentation. Based on Deolitte, 2015, it is widely acknowledged that previous and present health reforms in Kenya have not taken up a comprehensive strategy to health care financing. A possible starting point for enhancing a unitary network is to pool together tax funding and NHIF and procure health benefits structurally.

Another way of boosting harmonization would be connecting CBHIs and other microfinance companies that give financial risk cover to those excluded in the formal sector with the NHIF, this is done so as to optimize revenue cross-subsidy. Odek (2002) opines that it is crucial to ascertain that sponsor funds are harmonized in the medical framework to see to a rational strategy to health care provision. The procedure for remitting health care resources (donor capital, health cover, tax) in order to procure health care provisions bears implications for universal coverage and balance. (Tam, 2015) confirms that setting aside of public health financing in Kenya is conducted on a historical gradual basis. Computing for resource allotment is present, however they are barely applicable. Being dependent on an incremental strategy to distribute capital

encourages imbalances as the forces of demand and supply are the biggest indicators of budgetary reservations.

Over time favored zones (the zones highly populated with health centers), get huge allotments of funds as compared to the marginalized areas lacking in facility numbers. It is the belief of (Mills, 2015) that the government of Kenya needs to see to it that those funds are disbursed subject to necessity.

The primary determinants captured in the present formulas lean on usage tendencies and infrastructure, this implies that they permit historical allocation. Need focused indicators that have been largely demonstrated to foster a balance in resource distribution including the size of demographics; infant mortality and under five mortality are excluded in the formulas. A crucial aspect of furthering equity achievement and ascertaining that need based resource allotment is generously embraced is to speculate targets for equity for each hospital in a particular locality. Kimani, (2013) explains that such targets in equity need to inform replenishing of wherewithal in a leveled way to make certain that facilities carry out restructuring to allow for budgetary deductions or growths with little or minimal objections.

Hsiao, (2014) attests that donor backing makes up a huge percentage of health spending and contingent on how they are disbursed, they could foster or undermine balance. In a case where the capital is disbursed straight through project finances, disparities can occur, more so when sponsors express impartiality for one locality centered solely on practical and past reasons other than the necessity of medical care.

Mills *et al.*, (2003) states that equity can be enhanced by directing capital from stakeholders via the budget support and ascertaining that same proportions are delivered

to several areas guided by a need-based formula. Nonetheless this calls for the government to demonstrate integrity and use the money productively. As per Deolitte, (2015), it is however critical that sponsor funds are distributed and administered in a manner that corresponds to the wide goal of the Kenyan financing scheme to steer the nation towards achieving global coverage.

Very few citizens are insured. Most of Kenyans with health insurance are employed in the formal sector and form the wealthiest group. The NHIF is the chief reserve for insurance coverage for people employed in the formal sector, despite allowing for voluntary membership from informal sector employees, the coverage rate sustains at a low value. Plans for the introduction of a national health insurance scheme available to all Kenyans are in the pipeline. Although this is a positive advancement, it is unknown when the execution of this reform will occur. It was suggested by Kituku, *et al.*, (2016) that the Kenyan government needs to formulate tactics to augment NHIF utilization to all citizens, even the informal sector personnel. The justification being the degree of coverage in the informal sector is winding as a result of barriers to coverage.

The constraints of expanding health insurance coverage within the informal sector employees have been sufficiently recorded. For instance, Thailand for several years made little advancement towards attaining universal coverage, it was not until a decision was arrived at by the government to procure premiums for covering the informal sector using tax money.

Inclusive in the preparation of enacting the new guidelines, Kenyan government needs to rethink the effects on equity brought by covering employees in the informal sector by means of contributory health cover instead of tax money. Deolitte, (2015) confers

that such inquired need to form the foundation of pushing the nation's financial deliberations.

In Kenya, the NHIF will sustain the top source of health insurance until the transfiguration to a national health insurance is made possible. The NHIF is instrumental in safeguarding homes from high inpatient-based expenses. However, the underprivileged along with those employed in the informal do not enjoy its benefits. Attempts to augment NHIF coverage among the informal sector workers have hit a dead end. Deolitte, (2015) states that accordingly, there is minimal revenue cross subsidy in NHIF. The proposed national health insurance system is thought to be the chief technique for attaining universal coverage. Nonetheless, it is not understood how the 'brand-new' national insurance will tackle the minimum coverage rates that the NHIF undergoes.

The NHIF in collaboration with the state needs to come up with ideas on how to effectively finance premiums for those employed in the grey sector, this can either be through government revenue or external funding. Based on Kimalu *et al.*, (2011), the case of sponsors pledging a donation towards premiums for the informal sector, this need be a short period approach since the state already puts into place considerations to provide financial insurance to its citizenry.

Kimani *et al.*, (2011) claim that the NHIF provides an inclusive care package to members getting medical care in faith based and government hospitals. Those seeking medical attention from private hospitals frequently incur OOPs as the care package only covers a little proportion of inpatient expenses. Huge co-payments compromise the financial risk mitigation that health insurance offers. It is critical to formulate inexpensive and durable benefit package with reduced or no co-payments. As of today,

the NHIF runs at an excess and spends a huge amount of proceeds on management, at the same time offering a small benefit package. Readjusting the NHIF to reduce the costs of running has a possibility of freeing capital for procurement of inclusive provisions to affiliates. Finally, any developments in the NHIF benefit package need to be conducted with regards to the larger health schemes; to ascertain the goal of attaining global health coverage is arrived at.

The state needs therefore to involve the public in policy formation procedures to enhance global coverage so as to make sure that their desires are sufficiently put into consideration. Participation by the public in the initial levels of policy design can enhance propriety and therefore play a key role in successful implementation (Deolitte, 2015).

Devolution adds to the complexity, as Counties are now expected to finance health service provision for primary and secondary care services from their block grant allocation. Access to publicly provided services (the “free care” and subsidized/ “co-payment categories” therefore depends on the budget allocations at County-level, which further fragments financing of health services and hinders equal access to care (GoK, 2013).

Cost Sharing: Many African states strive to fulfill debt requirements in the middle of severe and reducing economic growth rates. The enactment of structural adjustments agendas and economic freedom policies have plunged several homes into a state of hopelessness and hardship. Several governments have been given no choice but to reduce on public spending, putting an end to free and reduced healthcare in support of market- centered health provisions coupled with distribution of expenses and user charged (WHO 2018).

The chief premise of the policy was to encourage more reimbursement of costs from partakers of public health provisions to create extra proceeds and supplement the backing of the under-funded non-wage consistent expense items, enhance access by the underprivileged to health provisions, minimize over exploitation of provisions and streamline the operation of the referral system. Zineldin, (2000) infers that the premise was to extend costs to those who utilize curative treatment alongside the ones that are better placed to pay and direct the subsidies to those unable to meet costs. Based on Hsiao, (2014), distribution of expenses emerged due to the reduction in government health budget and reduction in patronage.

With the rise in budgetary demands, it turned into actuality that the health department was financially crumbling since the state failed to fully back the health department by itself. This resulted in formulation of different sources of funding for instance cost sharing. Cost sharing was particularly intended to enhance the success of health programs, raise health care standards, create more proceeds for the health industry, regulate expenses in the public sector allocation or curative care and enhance balance in the health provision scheme (Humba, 2005).

The Health Care Financing Secretariat at the Ministry of Health (MoH) headquarters was mandated to oversee the enactment of cost sharing program into Kenya public health department (GoK, 2013).

Management Science of Health (MSH) by means of USAID-sponsored AFS project has been helping the Ministry of Health to enhance, collection, programing, and liability of cost-sharing proceeds along with situational capabilities. During the onset of the policy, clients catered for registration expenses depending on the type of amenity. Nonetheless the largest charges were recorded at the state referral hospital, Kenyatta

National Hospital (KNH) with the health centers recording the lowest. The local and district hospital charged Ksh 20 with health centers charging Ksh 10, while the referral hospital charged an outpatient medical attendance fee of Ksh 40, every visit. On the other hand, medical attention at all dispensaries sustained at a free charge.

The cost of Inpatient provisions lied between Ksh 20-100 in county and sub-county facilities. Consumers were also expected to accrue additional costs for diagnostic test, subject to the type of test. As a rule, 75% of fees gathered are withheld at the structure to cater for developments while the resulting 25% is paid to the district for the purpose of preventive and primary health care (P/PHC) operations.

Up until August 2015, the registration fee process sustained its nature until the state dismissed it in health centers and hospitals, apparently for several reasons, *inter alia* because: (i) the charges were keeping out a huge number of the community from getting health care;(ii) the expected adjustments in expected care quality were not successful as shown by regular cases of unavailability of crucial drugs and several medical provisions. (iv) Little deliberation between relevant parties and the government with regards to the programme design and methods of execution; (v) Money accumulated during the first period of the program were constrained by procedural setbacks while it could be of benefit in enhancing the quality of health services and (vi) poor directing and administrative facilities for execution (Audibert, *et al.*, 2004). With regard to cost-sharing financing, the critical components applicable in Kenya that affect healthcare financing in Kenya include: (a) out-of-pocket funding (b) private insurance and (c) funding with community.

Out-of-Pocket and Service Quality

Huge dependency on Out-of-Pocket expenditure as a reserve for health care financing-cost continues to act as a key constraint to Access, often procuring poor quality service. Tam *et al.*, (2014) asserts that a huge number of Kenyans lack the access to inexpensive healthcare as a result of destitution to date estimated at 42%. Based on the 2016 *Household Health Expenditure Report* by KNBS, due to financial constraints, 44% of Kenyan citizens who fall ill do not seek medical attention. The account further illustrated that of the underprivileged 40% carry out self- diagnoses when they fall ill. Cases of self-treatment among the destitute in Nyanza is at 44%, in Western at 51% and 42% in Eastern region, the common factor being lack of resources.

According to (WHO, 2019) private expenditure takes up a huge share of THE. Most of it is seen in un-pooled, out-of-pocket spending, which is well acknowledged as an impartial and counterproductive way of supporting health care. Mills, (2015) infers that while the needy allot little in actual terms as compared to the proletariats, a bigger proportion of the home spending goes to attaining their healthcare requirements.

In Kenya, funds for medical care come from donors, the public (government) and private (homes and private firms). Based on Kimani *et al.*, (2013), out-of-pocket remittances continues to be the biggest source from which health capital is obtained in Kenya, accounting for 51.1% of total health expenditure (THE) in 2015/2016 and in 2014/2015 it was at 35.9%. Reckonings of the 2013/2014 national health records showed that this sequence may have shifted to the national government donating 35% and homes coming up with 24.1% Kimani *et al.*, (2013).

Insurance and Service Quality

Stakeholders' donation to the Kenyan health industry is considerably huge and has drastically risen in the past ten years. Health coverage in Kenya can be obtained by way of health scheme systems; private insurance companies, public health insurance and to a degree community-based health insurance (CBHI) institution. Kimani *et al.*, (2013) contend that private health insurance is primarily available to the proletariat and the well-endowed communities.

Community-based health insurance is considerably foreign in Kenya since it was formed in 2015, as such, it has minimal coverage. Kenya Community-Based Health Financing Association (KCBHFA) states that at present there are 38 CBHF systems with 100,510 principal members who give out a total of 470,550 covered customers Kimani *et al.*, (2013). This constitutes an insignificant 1.2% of the overall Kenyan demography. The National Health Insurance Fund (NHIF) is the only existing public health insurance system in Kenya, it is a not-for-profit organization formed through a Legislative Act in the year 1966 as a faculty in the Ministry of Health. Initially, NHIF was supposed to offer affordable health coverage for waged members of the public and private sector getting a monthly wage of Kes 1000 going up (Deolitte, 2011; GoK, 2013).

Overtime, the NHIF has experienced numerous adjustments since its formation to create room for more benefits, get to informal sector homes and to bring in outpatient care. According to Deolitte, (2014), in the year 2013, appropriate directives were annulled and substituted by the NHIF Act No. 9 of 2013. This has brought about the evolution of the fund into an independent state enterprise with a Board of Management as the oversight (Kamau & Holst, 2008).

NHIF membership is based on homes and the insurance package covers the whole family and dependent Kin. The spouse allotment is strictly one, nonetheless there is unlimited coverage for children and other dependents. Only the sole provider who makes payments to the system. Households with more than two individuals who are employed and getting paid, are expected to make NHIF remittances as well. Right to medical care provisions is allowed to all dependent members of the family. Children ages below 18 by default enjoy NHIF coverage by virtue of their parent's membership. Children above the age of 18 must express their lack of economic independence by proof of learning and university documents (Deolitte, 2011). Mathauer *et al.*, (2016) contends that incorporation of the growing informal sector along with comprisal of the needy has proved to be a significant setback. Jacobs *et al.*, (2017) posit that the impartiality health insurance has to urban centers highly populated with the private formal sector fails to enhance geographical access. NHIF coverage strictly offers inpatient care with outpatient and preventive treatment presently unavailable. Although the NHIF Act gives allowance to the fund to cater for in and out-patient care, the coverage is yet to enact extension to non-hospital health provisions. This issue may be the reason why informal sector employee's hesitation to join since they might reason out a cover limited only to in-patient services may not support their health necessities. These are the kinds of issues that might steer the reform of the NHIF policy scheme.

It is essential to formulate a system to bring in more employees within the informal sector into health insurance systems. In some first world countries, significant achievement has been attained when it comes to ascertaining universal health care by means of health insurance. Nonetheless, Mathauer, *et al.*, (2016) explain that there has been a worry that it is difficult for emergent nations to incorporate the augmentation of the informal sector in health insurance.

Based on Mathauer *et al.*, (2016), there is a complexity in establishing income from informal sector employees in the line of which social security contributions can be reduced. While this is accurate since the check-off system is limited to formal employees, other strategies can be taken up to ensure they donate to the system. In their reasoning, Xaba *et al.*, (2002) identify the informal sector as having low and fluctuating, non-tax earnings, entrepreneurship and employment instability, demonstrating that integrating them into the health insurance system would prove difficult. The case could possibly be different since employees in different sectors have been able to pool their wherewithal. In Kenya, workers in the transport sector have sufficiently been able to pool funds despite not having regular earnings.

Mathauer *et al.*, (2016) suggest that “the self-employed and informal sector workers, that is, all persons who are not formal sector employees, can join the scheme on a voluntary basis” (2016:54). Nonetheless this is no promise of contribution to the system. Mathauer *et al.*, (2016) posits that the informal sector is usually systematized in huge regional or national affiliates for instance, taxi or farmer cooperatives, the numerous groups that these employees identify with or belong to have the potential of making contributory groups whereby pooling for health insurance can be done. Criel & Van Dormael, (1999) cite Germany as a good example, when she adjusted her health insurance from discretionary to mandatory and larger schemes out of small ones.

(Busse *et al.*, (2017) cited that Germany had laws on a system that covered the whole German turf for a single working group. For example, all miners were expected to join in one of several regional miners’ insurance funds. Upon effective signing up of these groups in health insurance, state laws would begin protocol to informal sector employees make remittances to health insurance firms. Kotoh *et al.*, (2017) state that

Ghana and nations alike have their health funding schemes redirected towards achieving health coverage for the needy as well as underprivileged groups. As stipulated by Akazili *et al* (2011), in Ghana, financial donations to insurance systems are formulated in a manner that they are ranked depending on peoples purchasing powers, the wealthy and healthy financed the ill and destitute while the employed adults would cater for the elderly and the children. This made sure that the needy were lifted off the burden of paying for health care provisions. Money allocated for medical care is set aside in the budget with a 5-year plan of work; over 0% of this is directed via the NHIS. Other sources of capital entail personal remittances to the Social Security and Pensions Scheme Fund and remittance by the Ministry of finance for those who are excused (GoK, 2013)

Mills *et al.*, (2013) states that another way that medical care is funded is by means of largely fragmented financing schemes: tax money and health insurance schemes. In Tanzania for example, there exist a mandatory system, the National Health Insurance Fund (NHIF) that caters to all civil servants and a maximum of 5 beneficiaries. The fund is supported by 6% deductions from earnings that is equally distributed between an employer and their staff.

Social Health Insurance Benefit (SHIB) is yet another example of health finance schemes. It indemnifies people employed in the private sector. A commonality between the NHIF and SHIB is that they provide inpatient and outpatient care, however the NHIF underwrites access to more than 5500 structures nationwide, whereas the SHIB assures merely 264 (World Bank 2014). Borghi, *et al.*, (2012) posit that in Tanzania members of the informal sector have a specific health insurance plan different from that of the formal sector. The Community Health Fund (CHF) is a state discretionary

scheme that provides insurance for the rural community whereas the Tiba Kwa Kadi (TIKA) scheme covers the informal sector within urban centers.

Based on Humba, 2011; Mills *et al.*, (2003), decisions regarding donations to the CHF are made at the council level and each home pays the same amount notwithstanding of purchasing power, providing them access to free healthcare at basic public health structures.

The National Health Insurance Fund (NHIF) is the single public health insurance scheme present in Kenya. A not-for-profit establishment birthed by a Legal act in 1996 as partisan of the Ministry of Health. Initially, NHIF was supposed to offer affordable health coverage for waged members of the public and private sector getting a monthly wage of KES 1000 going up (GoK, 2014). (Hsiao & Shaw, 2007) claim that overtime, the NHIF has experienced numerous adjustments since its formation to create room for more benefits, get to informal sector homes and presently an outpatient care package for affiliates is on the pipeline.

The National Social Health Insurance Fund (NSHIF) was suggested by the government to extend access to quality health provisions and pool contingencies among the wealthy and the destitute as part of the strategies of attaining universal healthcare. Hsiao & Shaw, (2007) explain that mandatory donation to the scheme would have been put on an individual's earnings, notwithstanding of the kind of job you are employed in and every person would get health care without incurring charges. Base on Mills, (2015), the NSHIF was set to assure both outpatient and inpatient hospital provisions. Nevertheless, the bill was not passed into a directive as it was dismissed as lacking financial feasibility. Kenya is yet to attain universal coverage in health care by means of NHIF as affiliation stays minimal.

Based on Mitullah and Wachira, (2003), despite constituting 83.83% of labor in Kenya, the informal sector falls short of a crucial level of social protection in terms of health and safety rules in addition to workmen's reimbursement. Kinyanjui and Mitullah, (2011) infer that most of these employees are recruited to fill the role of casual laborers and they operate under risky and difficult situations without benefits. The reason being the labor force is not stipulated under the Trade Disputes Act (GoK, 2016), the Workmen's Compensation Act (GoK, 1988) or the Factories Act (GoK, 1972). According to Carrin *et al.*, (2004); Mathauer, *et al.*, (2008). The NHIF has failed in accessing a huge number of Kenyans, more so the destitute as well as the informal sector workers.

Specific laws could have caused the low insurance of the informal sector, in particular the ones in the construction and building sector. For instance, the NHIF imposes a fine that is five times the payable amount for those that fail to remit payments by when they are due (Kimani *et al.*, 2013).

This kind of a law would sidestep the workers in building construction that came in as temps. This is evidenced by Kimani *et al.*, (2013) whose work revealed that those employed in the formal sector had a higher possibility of joining the NHIF program as opposed to the informal sector. The reason for this is the lack of a regular income in the informal sector that would have otherwise help them remit their donations consistently.

While the Kenyan government strives to attain universal health coverage, the informal sector employees should be taken account of as majorities are not insured by health insurance programs. Those employed in the informal sector are possible donors within the national health insurance programme. In particular states, health insurance schemes have been able to recruit them. For instance, the National Health Insurance scheme

(NHI) of Taiwan gathers premiums from temp jobs. In such a scenario, the Kenyan health insurance scheme can have frameworks to register informal sector employees in order for them to play a part in their health insurance. Carrin and Chris, (2005); WHO, (2018) agree that health insurance would be a channel of making extra funds as the health system is not sufficiently funded.

According to Mathauer, *et al.*, (2008), there have been worries that in emergent nations it is difficult to incorporate growing informal sector in health insurance. The scholars argued that “it is difficult to estimate the earnings of informal sector workers, with respect to which social security donations can be reduced” (2016). As much as this is true, since the check off system for formal workers cannot be acceptable, other tactics can be employed to ensure that they join in the scheme and start making payments towards the scheme (Mathauer *et al.*, 2016).

In between recognizing and acknowledging that each state has taken up different ways of recruiting the citizenry in health insurance, Kenya can also employ Singapore’s style, a state known for having one of the most effective health care systems globally in terms of competent funding and the outcomes attained in community health outcomes (WHO, 2018).

In Singapore, informal sector employees started optional health insurance systems state laws declaring them mandatory at the appropriate time. This ascertains that the person takes accountability for his/her own health status, a significant step in achieving universal coverage. As per Mills, (2015), mandatory cuts from informal sector employees would oversee financing of hospital expenditure for principal affiliates along with their dependents.

For Kenya to grow towards universal healthcare, it is critical to guarantee that the financing technique is unbiased and competent in both service delivery and revenue creation. Tam (2005) suggests that this can be affected in Kenya by means of a mixed framework of financing-a multi-payer system where healthcare is sponsored by public and private donations. A first alternative is to keep a mandatory health insurance scheme, also coined the national health insurance. Ordinarily this is enacted by a law that asks locals to procure insurance. According to Bentes *et al.*, (2004), in the same fashion as France, Japan and Germany, there can be options for settling on either public or private capital offering meticulous service.

A mandatory health insurance scheme generates a fund with a primarily, healthy, younger demographic contributing into a compensation pool and a fund with a mature and primarily less healthy group. Stephanie, *et al.*, (2015) explains that in so doing, sickness funds contest on price and there lies minimal benefit to get rid of higher contingency individuals since they are reimbursed through risk-mitigated tax remissions.

Social health insurance is an alternative, where donations come by employees, entrepreneurs, enterprises, and state are pooled into either multiple or single funds on a mandated ground. These resources basically contact with a totality of public and private insurance providers for the delivery of an identified benefit package. Public health and preventive care may be delivered through these resources or responsibility mainly kept by the Ministry of Health. Bentes (2004) posits that in the parameters of social health insurance, private health insurance firms may implement by parastatals or non-government ailment funds or in rare situations a variety of operations. The government needs to reduce the cost of health-care coverage if the underprivileged groups are

unable to match the costs, they should however hold on to overall ownership of their health care funds and the freedom on how to use them. Criel *et al.*, (1999) attests that this kind of patient proprietorship and option will form the demand for quality and price transparency needed in arriving at value-driven health care adjudications.

Based on Ranson, *et al.*, (2016), options, there would be the grassroots strategy to community-based health insurance in order to access the informal sector staff as well as the neediest areas at the local level. Nonetheless, community-based health care insurance schemes to date still struggle with setbacks, for example, they select only a tiny percentage of qualified people and only offer limited financial indemnity. In spite of this, the idea that health insurance coverage for the informal department remains stunted in Kenya: community-based health insurance schemes can offer financial indemnity for marginalized groups and relieve them from the extensive implications of out-of-pocket expenses when attaining medical care. Aside from that, the scheme has the capacity to educate on the importance of coverage, form experience in handling risk pooling schemes, as well as offer some level of risk safeguarding for marginalized groups. Community-based health insurance systems raise advance payment from the informal sector and gradually gather more wherewithal for health care.

The forfeiting suggestions that in order to attain universal health care in Kenya, systems need to be set to see to it that there is wide protection through health care adjustments that make sure insurance is availed to a bigger percentage of the demography. Hsiao and Shaw, (2007) suggest the need of the government to develop protocols and systems that help them widen insurance so that people already insured under basic care get more exclusive deals compared to what health care service providers avail presently.

Out-of-pocket expenditure forms the biggest percentage of the proceeds used to reach healthcare services. This reserve donated in 2014, 52 % of that total's health expenditures nationwide and 36% in 2015. These resources are employed immediately at the point of attaining health benefits as such they are contingent on the time of ailment, the availability of the funds as well as the health service expense. Humba (2005) infers that a minimum of 65% of these finances are collected private sector utility.

The second most crucial funding reserve, accounting for close to 30% of all national health expenses (almost specifically for the utility in the public department). Wherewithal received form patronage are predominantly directed to cater for basic spending in projects and programs, specifically, non-curative ones. A small percentage of Kenyans direct their health wherewithal into the scheme via private health insurance alongside the National Health Insurance Fund (Deolitte, 2011). The fundamental characteristic of the process of gathering is that it is unpredictable and fragmentary and unlike NHIF, there exist no formal or legal requirement on the size of remissions from any of these reserves. Accordingly, the destitute are not secured to access health care provisions when they fall ill, the government has failed in consistently achieving its pledges to raise health sector proportions in the same way most development partner funds on budget or on-account.

Funding with Community Participation:

Community based health care financing (CF) techniques are growingly instrumental in the health system of many underdeveloped nations. Wang & Pielmeier., (2012), claims that the requirement is that CF techniques avail to society groups that state and market-centered health financing approaches fail to do so. Low-income groups getting their

livelihoods from the grey sector (rural and urban alike) or socially alienated communities (as a result of cultural aspects, cognitive and physical challenges, other fatal sickness) are most likely unable to capitalize on state or market-centered health care financing schemes. Therefore, CF has gained huge popularity for its capacity to offer these social groups with enhanced financial security and health care access (Odeyemi & Nixon, 2013). Not even 4% of all health capital are exposed to risk-pooling by the private health insurance or NHIF. Consequentially, there is inadequate cross-subsidization from several income and social groups within the country.

Xaba, (2002) believes that in the same manner, the procurement of health care provisions is primarily personalized (fee-for-service) or input-focused (as line-item budgets) within the public department. As previously mentioned, the public department is therefore unable to direct a considerable percentage of health sponsoring to the degree where low-income societies can neither afford or use healthcare when they are in need (Kamau, 2014).

Odek (2002) posits that Fundamental financing for health care wells from three reserves: donors, public and private (customers). Customers are the biggest donors, with close to 35.9%, thereafter the Kenyan government and sponsor each at 30%. Over time, government financial backing as a proportion of GDP has been at a constant of just above 4%. A poll of the region demonstrating the total health budget as a proportion of GDP ranking Kenya last after Rwanda, Tanzania, and Uganda (GoK, 2013).

2.5.2 Debt Financing Strategies and Service Quality

Debt financing has been described as money that is borrowed to run a business venture. Commonly, bank overdrafts, government guaranteed loans and direct bank loans are explored debt financing strategies (Swanepoel, 2018).

Based on (Baltacı and Ayaydın, 2014), debt financing is the core aspect of outside financing for firms seeking additional funding upon starting up. O'Brien and David, (2010) state that debt financing has both benefits and a demerits on the expansion of enterprises as well as its critical ventures. As attested by Fama and French (2002), the merits of debt financing entail; the tax verifiability of interest and the minimizing of free cash flow hitches, on the other hand the demerit of debt financing entails probable cost of bankruptcy and agency indifferences between debt holders and shareowners. Hence, it comes down to debt financing adjudications, administrators make an attempt at forming a balance between the implications of financial strain that comes from risks of bankruptcy and corporate tax benefits of debt financing (Kraus & Litzenberger, 1973) alongside agency expenses (Jensen and Meckling, 1976).

Debt financing is one of financing choices that various firms frequently follow. Tirole (2006) states that there are various forms of debt financing. The nature of debt is that the loan should remit the money in addition to service costs for instance loan processing charges and interest. In the case where there is delay in reimbursement of funds as settled upon previously, the lender can initiate collection processes. This procedure may prove to be very inconvenient for the business owner who may be forced to surrender the enterprise alongside any non-corporate holdings used as collateral for the loan. An abiding loan regularly comes with a repayment period of one to five years. Such loans are normally secured (pledged by assets) and signed off by the business owners. Rates and terms on abiding loans differ hugely depending on the lending firm's protocol, financial levels and the lifespan of the establishment Bichsel & Blum, 2005).

The merit of short-term debt is quite critical when establishing a firm's financial effectiveness. Muchugia (2013) posits that there exists a considerable definitive link

between short period debt financing and lucrativeness since short period debts have a tendency of bearing minimal costs and raising it with a considerable low rate of interest will contribute to a rise in profit margins and in effect productivity. Modigliani and Miller (1963) back this premise that the net worth of a firm with debt is optimum as compared to debt-void firms. As such, it establishes that revenue can be gained through debt as a result of tax-deductible interest.

In their analyses Ebaid (2009) and Huang and Song (2006) demonstrated controversial outcomes on the impact abiding debt has on ROA. An analysis taken up by Langat, *et al.*, (2014) on the impact debt financing has on the lucrativeness of Kenya Tea Development Authority processing factories demonstrated that a firm's productivity, which is assessed by ROA was considerably and definitively linked with abiding debt and overall debt at a percentage of 5, on the other hand, short period debt demonstrated that short period debts do not result in lucrativeness. While the former discovered the negative implication of abiding debt on ROA, the latter realised that a prolonged debt negatively impacts profitability as gauged by the ROA. This brings about disparities in information for extensive investigation.

According to Teruel and Solane (2008), enterprises with a larger amount of short-term debt will keep considerable magnitudes of cash. In their debt financing analysis, Weinraub and Visscher (1998) revealed that profitability and short-term debt are definitively linked, this may be the most significant element needed for accessing external funding in states with weak decrees on collateral. Based on their work, a definitive affiliation between abiding debt and tangibility along with a negative linkage between tangibility and short-term debt was realised. Such outcomes match the notions

on capital structure which lobby's that companies short of fixed assets to act as collateral, are unable to acquire long-term financing.

Githaiga & Kabiru, (2015) believe that short term debt is definitively linked with company prospects. The impartial finding implies that there exists a positive correlation between financial effectiveness and short-term debt. Abiding or otherwise Long-term debt is money payable to lenders for a span of not below a year.

Research by Ebaid (2009) discovered that existed no considerable affiliation between long term debt and return on investment. Long term debts are the most desirable sources of debt financing this is frequently due to the base of their collateral and assets. In adjudication by Oguna, (2014), there was a correspondence between long term debt and overall assets of a firm. Githaiga and Kabiru (2015) stipulates that scientific outcomes achieved demonstrated sufficient proof that long term debts have a negative impact on financial productivity. These outcomes contradict a rationale by Galindo *et al.*, (2007) suggesting that long term debt could possibly effect improvements in performance. Huang and Song (2006) discovered that a long-term debts had a negative impact of profitability which was assessed by the return on assets. Long term debt was also realised to have a definitive impact on financial effectiveness.

While the rest Ebaid (2009) made a discovery that financial effectiveness was negatively impacted by long term loans. Nonetheless contradictory outcomes on this fundamental aspect of capital structure causing informational disparity for extensive enquiry (Huang and Song 2006). In an analysis by Galindo *et al.*, (2007) concerning access to long term loans and the implications it bears on firm productivity, an indicator was achieved implying that a brief maturity period was not instrumental to better performance. Debts that are Long-term may actually lead to productivity boosts.

Bank overdrafts: Organizations may sometimes opt to organize for short-term borrowings in terms of Bank overdraft to fund their operations. According to Borne, and Smith, (2013), Overdraft Systems started as emergency considerations from banks to their clientele; they had no intention of turning into a regularly performed, very high-cost credit commodity. Overdrafts take place when there is not enough money in a client's current account to cater for a transaction; however, the bank lends the funds to the account owner and covers the transaction fees as well. When it comes down to high-cost overdraft systems, a charge is placed on every overdraft transaction and the bank compensates itself for the overdraft and transactional charges, wholly upon a client's next deposit.

Most times banks provide lower-cost overdraft commodities, for instance an overdraft credit margin with a rational yearly interest rate or self-initiating transfer from a savings account or credit card, nonetheless financial companies frequently position or dive clients to take up high-expense systems. Based Johnson & Leary (2017), the Consumer Financial Protection Bureau (CFPB) regulates, firm's advertisement of overdraft schemes as a provision that protects clients for, the cringe and expense of rejected remissions.

Various people under overdraft protection usually do so since it is desirable to the available choices and inevitably minimizing access will worsen the states of several by raising the frequency of extreme occurrences for instance evictions, bounced checks, utility shut-offs, potential criminal charges, or forcefully employing high-cost substitutes like rent-to-own, illegal lenders, payday loans and pawnshops (CFPB, 2014).

Government guaranteed loans: According to the US Treasury Department (Houston, *et al.*, 2014) a Loan Guarantee system allows small enterprises to get term loans or credit margins that may be essential for their growth and advancement. This system offers a financier with the required security in way of a partial guarantee, for the lender to appraise a credit margin or a loan. Loan Guarantee Programs could possibly have elevated costs of running as compares to several credit backing systems as a result of signing off and current program monitoring requirements.

The agent or states proficiency and expertise need to entail loan guarantee purchase process management, credit analysis and underwriting, portfolio monitoring and reporting, alongside administration of small enterprises and national government programs. States may learn these skills internally or by help of agent like Economic Development Corporations or other national program offices. In line with subsection (1), funds owed under a guarantee shall bear a fee on, and remittable out of the Consolidated Fund with no further appropriation than this section. (2) Funds owed under a guarantee may be remitted only if the payment has been appraised by the Controller of Budget. (3) If funds are remitted out of the Consolidated Fund bearing upon a guarantee, an account will be presented to Parliament showing the payment information as postulated by the National Loans Guarantee Act (2011)

Direct Bank Loans:

A recent survey carried out by the European Commission, went to show that small and medium size enterprises (SMEs) are extensively reliant on bank loans as a means of funding their operations and attaining expansion ambitions (Silivestru, *et al.*, 2015). Developing countries have used the bank loans to improve the key health indicators of the population (World Bank Group, 2015).

Created in 2013, the Health III Project was centered on improving secondary health care provisions through increasing hospital funding, investing in diagnostic and treatment machinery in hospitals at the district level and enhancing clinical service administration of precedent NCDs.

On March 7, 2016, an extra funding worth US\$93 million was raised by the World Bank, the Financing Agreement would later be signed off in July 18, 2016. The extra funding was aimed at increasing the operations started under the *Health III Project* and see to it that all *rayon* medical unions and specific city medical unions in the nation have the backing of the project in line with the Government's hospital reform program. Alongside regular resources, the bank covers health missions through a variety of sponsor trust funds for international wellbeing. The biggest trust fund in the banks HNP portfolio is the Health results Innovation Trust fund (HrITf), a multi-partite fund created for the period between 2015-2022 to back result- oriented financing strategies within the health department, with a keen interest on SDG 3 (Ensure healthy lives and promote wellbeing for all). The UK and Norway financed the trust fund at a total of US\$575 million (World Bank, 2014).

2.5.3 Network Financing Strategies and Service Quality

Financial network ties according to Lin & Chen., (2015) can be a useful tool that can improve organisation performance. Examining the US and UK respective perspectives they discovered a definitive impact that network financial wherewithal has on organizational productivity. More often than not, financing affiliations with NGOs is a regular network funding approach with the medical care system profiting from massive backing from NGOs. Kamau & Njiru (2014) alleges that Kenya is comparatively reliant on financing from benefactors, most of which reinforce the advancement element of the

state health budget. Kimalu *et al.*, (2013) notes that, despite numerous NGOs in the health sector function nationwide, it proved trivial to establish the demography covered by these NGO health provisions.

Outside sponsors as well as the MoH back the medical provisions that NGOs deliver, same as the private sector in numerous ways FBOS, CBOs and NGOs assume particular medical provisions contingent on their competitive edge. Through capacity building and allocation of personnel, the MoH offers endorsement to mission health centres in addition to providing vaccination and medicines. Kimani *et al.*, (2013) attests that presently the private department (non- profit and for-profit inclusive) gunners' 40 percent of health provisions nationwide, majorly offering curative treatment and lesser preventive provisions.

There are procedures for MoH oversight and observation of FBO, NGO alongside other private establishments. The NGOs and private amenities liaise with communities in partnership with the DHMT. Independent resources form close to 14.8% of the overall health expenditure within Kenya. America is the biggest bipartite sponsor, directing financial backing through USAID, PEPFAR and the President's Malaria Initiative (Kinyanjui *et al.*, 2015). In 2013, America was speculated to make a spending of \$529.1M through PEPFAR programs only. The United Kingdom also pledges considerable bipartite capital to the health field, after which comes Denmark, Germany, Japan and the Netherlands.

The European Union has dedicated capital to health systemization in Kenya, and Kenya gains backing from the World Bank and agencies found in the United Nations program, not without UNFPA, UNAIDS UNICEF and WHO. The Clinton Foundation is present in the Kenyan health department in the same way faith-centered institutions for instance

Lutheran World Relief Catholic Relief Services as well as the Aga Khan Foundation (Mathauer *et al.*, 2016). In Kenya, The Global Fund to Fight AIDS, Tuberculosis and Malaria has overseen numerous undertakings and at the onset of this year, Kenya received an invitation to be part of the “first learning wave” of NSAs (National Strategy Applications). Based on Odek, (2002), it is an expectation that the Fund will employ the previous “learning wave” procedure to establish the viability of implementing the NSA for all prospective applications as a means of improving its procedure for auditing applications.

The entry of sponsorship into Kenya as of 2015 in addition to the need to do away with replication of international funding agencies pushed the state along with its development collaborators to make formal in August of 2015, a Kenya Health Sector Wide Approach (SWAp) rule of engagement. The nugatory document was endorsed by European Union, United states, Denmark, Japan the UK and Germany as adherents of multisector agencies. It obligates the relevant parties to improve Kenya’s health department to streamline their objectives and collaborate to undo “the reduction in the health status of Kenyans through proficient, state-of-the-art health care framework that is affordable, unbiased and available to each Kenyan citizen” The general guidelines of SWAp adhere to the 2015 Paris Declaration on Aid Effectiveness.

The SWAp stresses the need for benefactor groups to orient their health linked obligations with the Kenyan Government’s development agenda. Concurrently, it visualizes that, NGOs, patronage, and the state will come up with and execute shared techniques for planning, fund allocation, purchasing goods and giving feedback on program results. Based on Mills, (2015), the rules of engagement for SWAp also asserts

the need for benefactors in Kenya to make a commitment to offer consistent assistance over a long-lasting scheme so that the MoH can factor it in the process of planning.

Adelino *et al* (2020) examines investment choices of non-profit hospitals. It tests how shocks to cash flows caused by the performance of the hospitals' financial assets affect hospital expenditures. Capital expenditures increase, on average, by 10–28 cents for every dollar received from financial assets. The sensitivity is similar to that found earlier for shareholder owned corporations. Executive compensation, other salaries, and perks do not respond significantly to cash flow shocks. Hospitals with an apparent tendency to overspend on medical procedures do not exhibit higher investment-cash flow sensitivities. The sensitivities are higher for hospitals that appear financially constrained.

Nyakundi *et al.*, (2014) contends that after the enactment of the Kenya Health SWAp and Code of Conduct, the state continued to foster its commitment to capitalizing on collective unions is ordered to enhance health by looking to liaise with the International Health Partnership (IHP+). The latter was formulated in London in September 2015 as a means to “achieve better outcomes by enhancing the way emergent nations, donors and international agencies liaise to come up with and execute national health plans.”

As per Ranson *et al.*, (2016), as of December 2015, Kenya has enunciated a strategic plan to furthering associations for health and since that period attained financial support from the WHO, the United Kingdom's Department for International Development (DFID) to foster planning and expense tracking that is health based. Repercussions of the two-month post-election skirmishes in 2017-2018 had a huge impact on the health department in several manners. According to RoK (2014) the rivalry between political affiliations and ethnic clusters not only led to the death of an average of 1500 individuals

with more being forced out of homes, but rival sects employed sexual brutality against their victims to further their pain and shame.

Shaker, *et al.*, (2014) studied effective marketing campaigns and donor culture and how it influenced fundraising campaigns at Indiana University. The researchers used both quantitative and qualitative case study analysis to examine donor characteristics and determined that demand-side communications were not as conducive to attracting donors as supply-side communications were. They posited that demand-side giving was a technique used to impress the obligation to give upon the donors. Demand-side communication in the study included a call-to-action stimulating guilt, anger, and compliance for motivating a donor to give, while supply side communication encouraged donors to give what they could and be a part of the greater good. Supply-side communication occurred when the fundraiser afforded the donor an opportunity to support and effect positive change (Shaker *et al.*, 2014). Supply-side communication also recognized and acknowledged both the needs of the benefactors and the donors. They suggested that supply-side communication was the most effective way to approach donors for support.

In the western province, where the skirmishes were intense, PLWD recorded their lack of access to health centers or new supplies of essential anti-retroviral drugs since they feared they would be targeted upon leaving their households. Accounts show that cognitive stress that ensued after the political instability had an impact on all citizens in Kenya (RoK, 2014).

2.6 Moderation Effect of Hospital characteristics on Service Quality

A large number of analyses have looked into how attitudes of health service quality are impacted by patient experience (Jenkinson *et al.*, 2015a; Danielsen *et al.*, 2014; where

care is provided Jha *et al.*, 2016; and socio-demographic aspects (Murante et al., (2013). These analyses demonstrate various elements that might possibly be a driver of satisfaction, however in most situations, the systematic strategies take up failed to consider critical issues for instance the significant peril of mingling among aspects as well as the over assessment of disparities.

High-rise frameworks have resulted in significant discoveries for performance appraisal systems in the health industry as per Krumholz *et al.*, (2014) facilitating the formulation of similar procedures tailored for individual and organizational features. Nevertheless, there exist adequately few works that investigate the influence organizational and other related factors have on client's assessments, for instance service size, geography, according to Young *et al.*, 2016; Hekkert *et al.*, (2013), organizational status (Community vs Teaching hospitals), employees' satisfaction and administrative features (for instance, health jurisdictions) (Brown *et al.*, 2016). Their outcomes demonstrate that the employment of a multilevel framework plays a part in the more conventional analysis disparities in indicator scores representing patient satisfaction.

Most of the studies on hospital characteristics are not keen in analyzing the interactive effects of such characteristics on patient satisfaction and service quality. In Kenya, there is no single study by year 2017 that has focused on hospital characteristics as a moderating factor on service quality. The paucity of data was important in driving the inquiry process on moderating effects of hospital characteristics on hospital service quality.

Compton, *et al.*, (2014) noted that hospital characteristics are the factors in hospital that differentiate a hospital from another. This includes the number of beds that are available

in the hospital the period of time that the hospitals have been in operation and the type of hospital. In addition, Level of hospital and funding are other hospital characteristics which vary from hospital to hospital. These characteristics affect the quality of services that are offered in hospital. Hospitals with better such characteristics have better quality of service by their service providers as compared to hospitals with poor characteristics. They determine how patients are attended to how they are accommodated and how services are delivered to them (Andrews, & Bonta, 2014).

Several states are shifting to planning contingent upon activity and service volume. Bed occupancy and the beds per group ratio is still a fundamental measure in hospital capacity planning. Despite Bed capacity still being the desirable metric for hospital care and service provision planning, there are various errors linked with this strategy. Of great significance is that neither bed count nor occupancy offer a sufficient estimate of the services rendered in hospitals, especially due to the huge differences in case mix hence medical expenses of the parties occupying them, nor are they appropriated for speculating projections in demand. It is therefore a suggestion by the metric that the sole fragment of capital reserve is the beds, crippling the productivity of the rest of the assets.

The wave that is nearly global towards increased numbers of outpatients and reduced admission periods at hospitals continues to contradict beds as a metric for determining capacity. In addition, the sustained employment of “bed numbers” doesn’t take into account merits and trade-offs from creating various types of health funding. Therefore, Sheetz, *et al*, (2016) deduce that since they are one of the existing indicators of hospital capacity that are regularly collected, bed count may hold the advantage of utility, but the fundamental demerits of this index are a growing perception.

Etzioni, *et al.*, (2014) suggest that diagnosis-linked classes are also not a suitable method for capacity planning. They are basically a mechanism for grouping admissions, drawn from subsequent micro-costing data and combining diagnosis and any interventions. This means that they can be used for calculating prices, but they say little about the mix of resources that is needed. Conventionally health centers were tailored around disciplines and departments instead of being centered on the patients' needs. Patients frequently undergo a long waiting process before being attended to, with large areas availed for stagnation. As an adjustment to bed shortage, wards and beds practically turn into waiting areas for "work in progress" and have previously been organized correspondingly. A repercussion is that in several health centers the influx of patients is inexpedient, disarrayed and confused. Still inadequate patient flow customer and personnel satisfaction in addition to practical use of funds.

It also undermines the quality of care and patient wellbeing, with proof that patients attended to during the weekend record the worst results, however this is not possible where services are properly arranged. Various aspects namely the expanding intricacies of treatment and an expressed interest in viewing the care protocol from the client's outlook, have granted this scenario as appropriate, culminating in demands for care frameworks based on care protocol, ailments and patient pathways. Based on Wang, *et.al.*, (2015), a successful and reliable hospital centered program will concurrently enhance patient outcomes and decrease hospital length of stay.

Decreasing length of stay and freeing up, or releasing of hospital beds, represents a cost saving. However, the magnitude of this cost saving is difficult to quantify and is likely to depend on many factors. Hospital beds can have two types of value: (1) how much they cost the hospital to run the accounting cost (referred to as the hotel cost by the

WHO and (2) the value they have in terms of achieving desired outcomes the economic (or opportunity) cost. Previous cost-effectiveness analyses most often use the accounting cost of some variant of it. This is predominantly because it is an easier value to calculate and to understand, especially by hospital administrators. A hospital department may face the situation when patients are turned away because all beds are occupied, and the corresponding healthcare service is thus postponed due to the insufficient number of available beds (Herrin, *et al* 2015). An insufficient financial support or a poor resource management often causes this situation. On the other hand, an over-provision of hospital beds or an unrealistic health service time is a waste of the already limited resources.

Accordingly, it is essential to have a complex association that pulls together under the same umbrella, complex scientific methods and automated learning styles to aid in coming to better adjudications concerning the allotment and utilization of hospital beds in a bid to enhance patient benefit and save funds. The time of life a hospital has determine other resource that are available in the hospital. Hospitals that have been in operation for a long period of time are associated with high number of qualified practitioners (Suleiman, *et.al.* 2014).

Qualification and experience are the key determinant of quality of service in health sector. This is an assurance to the patient that they get quality service. Handel, *et.al.*, (2014) was for the opinion that type of hospital has impact on quality service delivery by health care workers. Bigger hospitals are associated with better service because they are prioritized when employing health practitioners. This implies that they are more likely to have qualified practitioners at almost all their departments. On the contrary Tourangeau, *et al.*, (2016) argued that these hospitals may be affected by too high

number of patients that seek attendance from such hospitals. This increase pressure leading to poor service delivery since the practitioners may not have enough time to attend individual patient at a time. Availability of adequate and dependable stream of fund affects the service deliver. This is because health practitioners may be willing and able to give the appropriate service to the patient but due to lack of necessary resources, they are unable to offer such services (Tsai, *et al.*, 2015).

2.7 Knowledge Gap

The quality of health care services has been the subject of constant interest among researchers and health institutions. To date, and despite the fact that many hospitals began to adopt for different quality improvement initiatives in the last two decades, the literature on patient perception about the quality of health services is still limited (according to researcher knowledge), especially in the public sector (Al-Damen, 2017).

In Kenya, organizations in the service sector are in an increasing pressure to demonstrate that their services are customer focused and that continuous improvement on the services being delivered is observed. The limitations of finances and other resources within which these organizations operate, make it difficult to remain competitive. It is therefore essential that customer expectations are properly understood and measured, and that from the customers' perspective, any gap in the customers' expectations and perceptions is identified (Mbutia, 2013).

The literature above indicates that though service quality is a serious concern in the health sector and there is a lot of concentration on financials and how health sector acquires funding as main characteristic of hospital. However, there is limited work done on institutional or hospital characteristics, which included bed capacity, age of hospital, and type of hospital and level of hospital. Service provision in hospital is not only based

to finance condition and sources of finance. According to Lu, *et al.*, (2015) hospital experience increased difficulty in coping with emergency pressures and that the reduction in beds had gone too far a fact apparently supported by a plateauing in the downward trend in the number of beds. The hospital sector especially has long been a focus from all sides for rhetoric and emotive political appeals (Clissett, *et al.*, 2013).

In the middle of escalating health expenses and the political controversy on healthcare reform, overutilization of health care is a critical discussion. A significant point of contention is that the ease of access to deliver itself explicitly results in extra usage or, a bed built is one filled. Ideally, catheterization labs, hospital beds or machines are at hand. In addition, De Smet *et al.*, (2013) insisted that the overexploitation on the margin of such impetus has a possibility of variably resulting in further overspending in this high fixed expense infrastructure while patients are scrambled for by professionals. Medical expenditures and usage regionally have been realized to be positively linked to regional gaps in the supply of medical doctors as well as hospital bed count.

However, even controlling for observable demographic characteristics, cross sectional comparisons across regions are not likely to represent causal estimates. Availability of medical resources leads to additional utilization is difficult; it requires variation in supply that is not driven by patient demand and unobserved health conditions effectiveness (Wurdak, *et al.*, 2016).

The RoK, (2014) stipulates that there is a huge need among public hospitals for financial backing to restore, restructure, mechanize and fill them with personnel to make sure of attaining successful and competent service provisions are offered to Kenyan citizens. Stringent financing for initiatives led by Community Health Workers nationally has greatly impacted the provision of health care more so locally. According

to Agarwal *et al*, (2019), a huge number of Kenyan public hospitals specifically in the rural setup are in a detrimental condition preventing them from effectively carrying out and providing amenities to patients; indeed strategic steps need to be laid down in order to save the terrible state they were in. Nonetheless, the funding extended may have failed in effecting service quality within the health facilities. This study, therefore, assesses the effect of specific healthcare financing strategies in the provision of quality healthcare services in the hospitals and how the same is affected by the hospital characteristics.

2.8 Conceptual Framework

To achieve the objectives of the study, the various aspects under the study were conceptualized in figure 2.1, following literature review where the gaps were identified. In the framework, the relationship between the dependent variable (service quality), the independent variable (financing strategies) and the moderating variable (hospital characteristics) were conceptualized. The dependent variable was examined under the dimensions of tangibility, reliability, responsiveness, assurance and empathy. The independent variable was examined under the constructs of equity financing (National Hospital Insurance Fund, Ex-chequer financing, community financing, out-of-pocket financing), debt financing (Bank Overdraft, Bank Loan and Government Guaranteed Loan) and network financing (Research funding and Donor Projects). The moderating variable is hospital characteristics (bed capacity and facility type). These factors were considered to determine their overall effect on the provision of quality healthcare services in hospitals in Kenya.

Independent Variable(x) Moderating Variables (m) Dependent Variable (y)

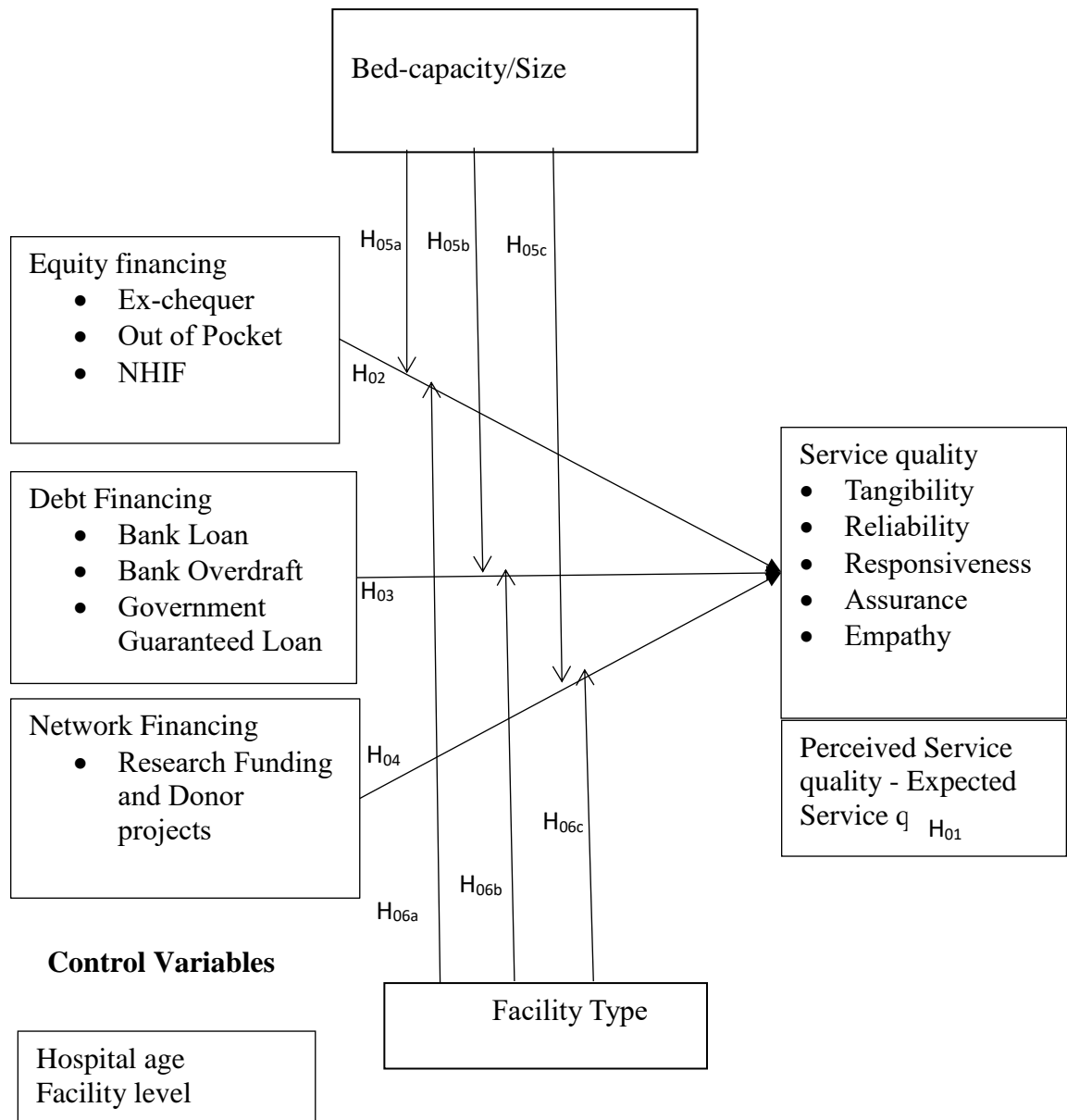


Figure 2.1: Conceptual Framework

Source: Researcher, (2017)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the research design as well as the methods that were used to sample the population and the target population bringing out the sample size. The chapter further looks at methods of data collection, research instruments, and their validity, and reliability, operational definition of variables and methods of data analysis.

3.2 Philosophical Paradigm

Creswell (2009) defines philosophical paradigm as the basic set of beliefs that guide actions also known as paradigms, epistemology, and ontologies. In Literature, there are four different worldviews: Post positivism, constructivism, and advocacy/participatory and pragmatism. The study was guided by post positivism paradigm. Post positivism holds that there is always a cause leading to effect. In the case of this study, there will be development of knowledge through measure of objectivity that exists in the world. This worldview was appropriate for this study given its nature of testing laws and theories to verify or confirm in-order to understand the world. The study is associated with experiments and surveys where quantitative data is the norm (Yin, 2003). Analysis methods using statistical and mathematical procedures were used and conclusions drawn to help answer the research questions.

3.3 Research Design

An explanatory survey research was adopted for this study. It is the initial research into a hypothetical or theoretical idea. The design is usually applicable in settings where a researcher has an idea or has observed something and seeks to understand more about it. The design was appropriate for this study and was helpful in laying the groundwork that will lead to future studies (Kombo & Tromp, 2006). To overcome any possible

limitations, hospitals and patients were selected as randomly as possible and across different counties for representation.

3.4 Study Population

The target population is defined as the specific population containing all the study elements that the study is interested in. According to (Ngechu, 2017), a population is a defined set of people, services, elements, events and group of things or households that are being investigated. The three senior management officers and one client/patient receiving services at the hospital at the time of the interviews were the target population. With 4 respondents drawn from each of the 233 hospitals, a total of 932 respondents were expected. The targeted hospitals comprised of public, private and faith-based across the country falling between level 4 and level 6. The target population had the appropriate information on the constructs of the study given that their managerial roles in the running of the hospitals and the position of the client as the receiver of services. Lower-level facilities were excluded from the study given the volume of patients they receive and the level of care and services they are able to offer with their capacity.

Table 3.1: Target Population

Group and number	Level 6	Level 5	Level 4	Total
Head of Clinical Services	7	20	206	233
Heads of Finance & Administration	7	20	206	233
Head of Nursing	7	20	206	233
Client/Patient	7	20	206	233
Total	28	80	824	932

Source: Survey Data, (2017)

3.5 Sampling Size and Sampling Technique

Oso and Onen (2009) define a sample as part of the target (or accessible) population that has been procedurally selected to represent it. The study employed simple random sampling of the hospitals and selection of client/patients' participants while purposive

sampling was used to identify the members of top management with information relevant to the study. Given that no other studies targeting level 4, level 5, and level 6 hospitals have been carried out, it was difficult to know about the population behavior (What to expect from these hospitals) thus the Slovin's formula for sample size determination was employed to compute sample size.

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

$$233 = \frac{535}{1 + 535 (0.05)^2}$$

Where:

n = the sample size

N = the population

e = level of precision/error tolerance

Using above formula, a sample size of 233 hospitals was selected from a population 535 level 4 to 6 hospitals in Kenya.

3.6 Sampling Frame

According to Wallen & Fraenkel (2001), the reason for a simple random sample is for each member of the population to have an equal and independent chance of being selected, while a proportional sample will enable the sample size to be as a fraction of the whole sample size. The sampling frame of the study was the list of registered level 4, level 5 and level 6 hospitals in Kenya. Hospitals were selected randomly in the study. To select health worker in the hospital stratified random sampling based on departments was used. Individual health workers in each department were randomly selected. This departments included; finance and administration department, the clinical services

department, and the nursing departments provided a sampling frame for the hospital staff to be interviewed.

3.7 Data Collection

3.7.1 Types and Sources of Data

The study collected primary and utilized secondary data for verification. Primary data was collected from the respondents of the study using the designed data collection instruments distributed in the hospitals. Secondary data from the Kenya Master Facility List (MFL) and various county health departments' websites was utilized to confirm the level of the hospital and the inception year. Secondary data was therefore mainly used for data triangulation and verification of hospital details especially on moderating factors.

3.7.2 Data Collection Instruments

Primary data was collected through a SERVEQUAL objectively structured questionnaires. The questionnaire was self-administered but with research assistants available to assist patients who were unable to fill them on their own. Structured questionnaires were used to collect the required information from the study population (Cooper, 2003). The questionnaire was divided into two sections; the first section was covering the background information of the respondents while the second section covered the objectives of the study. Specifically, for the questionnaire targeting hospital staff, the socio-demographic section had questions pertaining to their background (age, level of education and gender), their years of experience both at work and with the hospital and to the best of their knowledge the characteristics of the hospital (bed capacity, age of the hospital, hospital level, Facility Type) and their idea of funding streams that supported the hospital.

The second sub-section of the questionnaire focused on hospital service quality and particularly containing statements for gauging the key dimensions of service quality (tangibility, assurance, responsiveness, empathy and reliability). The other sub-sections focused on the different financing strategies (debt financing, equity financing and network financing) and required them to respond and gauge how the hospital has fared or can fair under each of these financial strategies. Upon obtaining the list of the different available staff in each randomly selected hospital, the researcher then randomly picked from the list one staff from the finance and administration department, one staff from the clinical department and one staff from the nursing departments. For all those who consented, the researcher handed over a questionnaire. They had the option of filling it on the spot or fill it and then hand it over to a research assistant within a weeks' time. The research assistants were on standby to collect the filled questionnaires when called upon.

The questionnaires targeting the patients and patient assistants had two broad sections. The first section collected data on their socio-economic background (age group, gender, and marital status) and the second section was on their take on the quality of services they expected to receive in that hospital. For the patients, the questionnaires were filled on the spot because of the logistical challenges of following up the patient once they leave the hospital. The questionnaire was self-administered to those who could comprehend, and the researcher or research assistant asked them the questions and filled the questionnaire for them as per their responses in case they were not able to read or write. Questionnaires were convenient for this study because they enabled the researcher to obtain a lot of information within a short period (Kruger, 1997). The instrument ensured anonymity of respondents as their identities was not requested. A copy of the questionnaire is appended at the end of the thesis (See Appendix iii and iv).

3.7.3 Data Collection Procedure

Data collection refers to gathering of information for research purposes. Data was collected using structured questionnaire, which served as the most appropriate instruments. After attaining permit for conducting research, the researcher used self-administered questionnaires to collect data from the participants. The researcher also sought an introductory letter from the University to carry out the study. During the data collection process, the researcher visited the sampled hospitals premises with the introductory letters. The researcher distributed questionnaires personally with the help of research assistants and collected them.

3.7.4 Measurement of Variables

Table 3.2: Measurement of variables

Variable	Indicators	Measurement	Section in the Questionnaire
Quality Services	Tangibility	5 Item Likert scale	Part B
	Reliability	Data information	
	Responsiveness	(Ordinal)	
	Assurance		
	Empathy		
Equity Financing	Ex- Chequer	5 Item Likert scale	Part C
	Out of Pocket	Data information	
	Payments	(Ordinal)	
	Insurance		
Debt Financing	Bank	5 Item Likert scale	Part C
	Overdrafts	Data information	
	Government	(Ordinal)	
	Guaranteed		
	Loans		
	Direct Bank Loans		

Source: Survey Data, (2017)

The respondents were informed of the purpose of the study and given an information leaflet, which was on the front page of the questionnaire. They read the contents on the leaflet and requested to participate after consenting (Kruger, 1997). Three employees from senior and middle-level management specifically from the clinical services department (a doctor or a clinical officer), finance, and administration (hospital head of finance or hospital administrator) and nursing services (head of nursing) were purposely picked from the 233 sampled hospitals across the country. Upon completing administration of the questionnaires to the hospital staff, one patient as they entered the hospital was randomly picked. If the chosen patient was too ill to talk, their accompanying patient assistant was requested to do it on behalf of their patient and the questionnaire was administered to them.

3.8 Validity and Reliability of the Instruments

3.8.1 Content Validity

Validity is the extent to which the interpretations of the results of a test are warranted, which depends on the particular use the test is intended to serve (Sireci, 1998). The responsiveness of the measure to change is of interest in many of the applications in health care where improvement in outcomes as a result of treatment is a primary goal of research. Several issues may affect the accuracy of data collected, such as those related to self-report and secondary data sources. Self-report of patients or subjects is required for many of the measurements conducted in health care, but self-reports of behavior are particularly subject to problems with social desirability biases. Data that were originally gathered for a different purpose are often used to answer a research question, which can affect the applicability to the study at hand.

The validity of the instrument was tested by carrying out a pilot study to ascertain if the questionnaire was valid enough for collecting adequate and valid information. In addition to this the objectives of the study were put into consideration when formulating the questionnaires administered to ensure that the questions are compatible to the main objectives of the study. To test on the reliability of the study the researcher gave some of her fellow students and the supervisor to go through her work to ascertain if the study to be done was reliable. The university professors who are technical in this area of study provided helpful insights and verified that the indeed the SERVEQUAL questionnaire had valid content that could help answer the research questions.

3.8.2 Predictive Validity

According to Eastwick *et al.*, (2014) predictive validity is the extent to which a score on a scale or test predicts scores on some criterion measure. Predictive validity shares similarities with concurrent validity in that both are generally measured as correlations between a test and some criterion measure. In a study of concurrent validity, the test is administered at the same time as the criterion is collected. This is a common method of developing validity evidence, a test is administered, then a rating or has already been, obtained independently of the test.

Predictive validity of scores was employed to test the validity of the research instruments. This was examined to determine the extent to which a particular measure was a good predictor of another variable. This was done by determining correlating scores (x is continuous) with scores or classifications from the measure the researcher was trying to predict(y). Appropriate correlation coefficient was computed (depending on the measurement scale). The value expected was greater (>) 0.80 for variables positively related or less than (<) -.80 for variables inversely related to conclude data

(x) are said to have good concurrent validity. The Pearson Product Moment Correlation (PPMC) was employed to determine the predictive validity of the data. The PPMC was used to describe the strength and direction of the linear relationship between the independent and the dependent variables in the study.

3.8.3 Reliability

Reliability refers to the extent to which an instrument yields similar results each time it is administered by independent persons under comparable conditions (De Vos *et al.*, 2010). Odek (2002) notes that reliability of research instruments is concerned about the degree to which a particular measuring procedure gives similar results in repeated trials. The study employed the Cronbach's alpha coefficient to measure the internal consistency of the questionnaire. As a general rule whereby, a value of $\alpha > 0.7$ will be determined reliable enough for each of the data sets where α (Cronbach alpha) was 0.71.

3.9 Data Analysis Methods and Modeling

A series of data analysis procedures were carried out on the collected data. This section gives a detailed summary of each of these key procedures. All data analysis was carried out using Statistical Package for Social Sciences (SPSS) package version 20 and output summaries made using Microsoft Excel. SPSS was an important package because it offered extensive data handling capabilities and numerous statistical analysis routines that can analyze small to very large data statistics (Mathauer *et al.*, 2008). In summary, Pearson moment correlation co-efficient was used to explore the effects between the dependent and independent variable while multiple linear regression was employed for hypothesis testing of direct effects while Hayes Model 1 version 3.4 was used to examine the effect of moderating variables on the relationship between financial strategies and service quality. The following procedures were carried out:

3.9.1 Data Transformation

Data transformation entails preparing the data to facilitate statistical analysis, and this includes data checking, computing-derived data from the original values, statistically adjusting for outliers and data transformation. Manikandan, (2016). The missing data was replaced by mean and year the hospital was started and bed capacity which were extremely varied, data triangulation and verification by verifying the data through the Kenya Health Facility List (KHFL) was done. The data was finally subjected to Factor analysis to bring intercorrelated variables together under more general, underlying variables. More specifically, the goal of factor analysis was to reduce “the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions which are supposed to underlie the old ones” (Rietveld & Van Hout 2017)

3.9.2 Exploratory Factor Analysis

Given that all the service quality constructs were represented by a number of statements, it was important to identify which statements formed a coherent subset that was relatively independent of each other (Bansal, & Taylor, 2015). Exploratory factor analysis was used for data reduction to a smaller set of variables and to help with exploring any underlying theoretical structures. The method used for driving the factor was principal component analysis. Factor analysis was employed for data reduction through the following steps: 1) All 100 variables on service quality were selected and measured 2) extraction of the factors 3) the number of factors were then determined 4) the factors were then rotated and finally 5) 56 selected statements with higher factor loadings of above 0.5 were picked 5) from each of the selected statements, a single representative variable was computed using averages.

This procedure was particularly important in teasing out important constructs under the key financial strategies. Most importantly, the key independent variables extracted were ex-chequer, out of pocket and National Hospital Insurance Fund (NHIF) under equity financing strategies while community financing was extracted under network financing strategies. Each of these variables were examined whether they passed the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and the Bartlett's Test of Sphericity. In summary, 7 key factors were extracted: access to the national hospital fund (NHIFAccess), adequacy of the national hospital fund (NHIFAdequacy), community funding, ex-chequer funding, debt financing, out of pocket financing and financial networks. With these independent variables, examining how the affected service quality in detail was feasible. This procedure then gave room for other types of analyses to be done.

3.9.3 Pearson's Product Moment Correlation Test

Hair, *et al.*, (2015) was for the opinion that in order to examine the relationship between the different financial strategies and the delivery of quality service, correlation. Pearson correlation co-efficient was computed to examine the relationship between the dependent variable (hospital service quality) and independent variable (financial strategies). Given that the data was collected from a random sample of the population of hospitals in Kenya, this test was performed under the assumption of normality.

The test also operated under the assumption of linearity of data and that the ratio or interval measurement scales were used to measure the data (Polonsky and Waller, 2005). Given that data collected was on a 5-scale attitudinal Likert scale, and thus interval in nature, composite variables for each independent variable were calculated

for each variable using a sum mean score. After establishing relationships, multiple linear regression analysis was done.

3.9.4 Hypothesis Testing

In order to examine the effect of each financial strategy on the hospital service quality, linear, multiple regression and PROCESS Version 3.4 (Hayes model 1) were used, with a financing strategy (debt, equity and network) as the independent variable x and hospital service quality (SERVEQUAL gap score) as the dependent variable y . The strength of each of the models was examined by looking at the R^2 change. An analysis of variance (ANOVA) test was run to test whether the models were significantly better at predicting service quality than using the mean as a better guess. Interpretations were made by examining the F (f-ratio) and the P -value associated with them. The regression coefficients were examined for interpretation of the magnitude of contribution the independent variable had on hospital service quality and the direction of service quality (either negative or positive).

Hypothesis 1

The data had been analysed with the help of mean scores technique, paired sample t -test and independent sample t - test. The paired sample t -test was performed to determine the significance of differences between perceived and expected scores of service quality. At this stage, the first hypothesis was tested.

Hypothesis 2, 3, 4

The study direct effect was tested using multiple regression model. Multiple regression model used in this study is given as;

$$Y = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon_i \dots \dots \dots (1)$$

y = Service Quality (composite variable derived from average) of gap scores across all dimensions of service quality)

α = constant;

$\beta_1 \dots \beta_3$ = the slope

x_1 = equity financing

x_2 = debt financing

x_3 = networking financing

ε = error term

Hypothesis 5 and 6 Moderating Effect

As discussed in the results chapter hospital bed capacity and type of hospital were picked as the main moderating Hospital characteristics while the size of the hospital and the age of the hospital were picked as the control variables. Hospital bed capacity and type of hospital were selected as the main effect variables because they most often appear to be related to the quality of services in the hospitals. A statistically significant rise of predictive ability of the model was interpreted to have significant moderation between the main effect variables and financing strategies on the service quality of a hospital. Only significant results were subjected to PROCESS moderation analysis. Macro PROCESS version 3.4 developed by Hayes, (2014) and reviewed by Hayes, (2017) was employed. A key output of the analysis was the interaction plots from data on conditional effect of x and y .

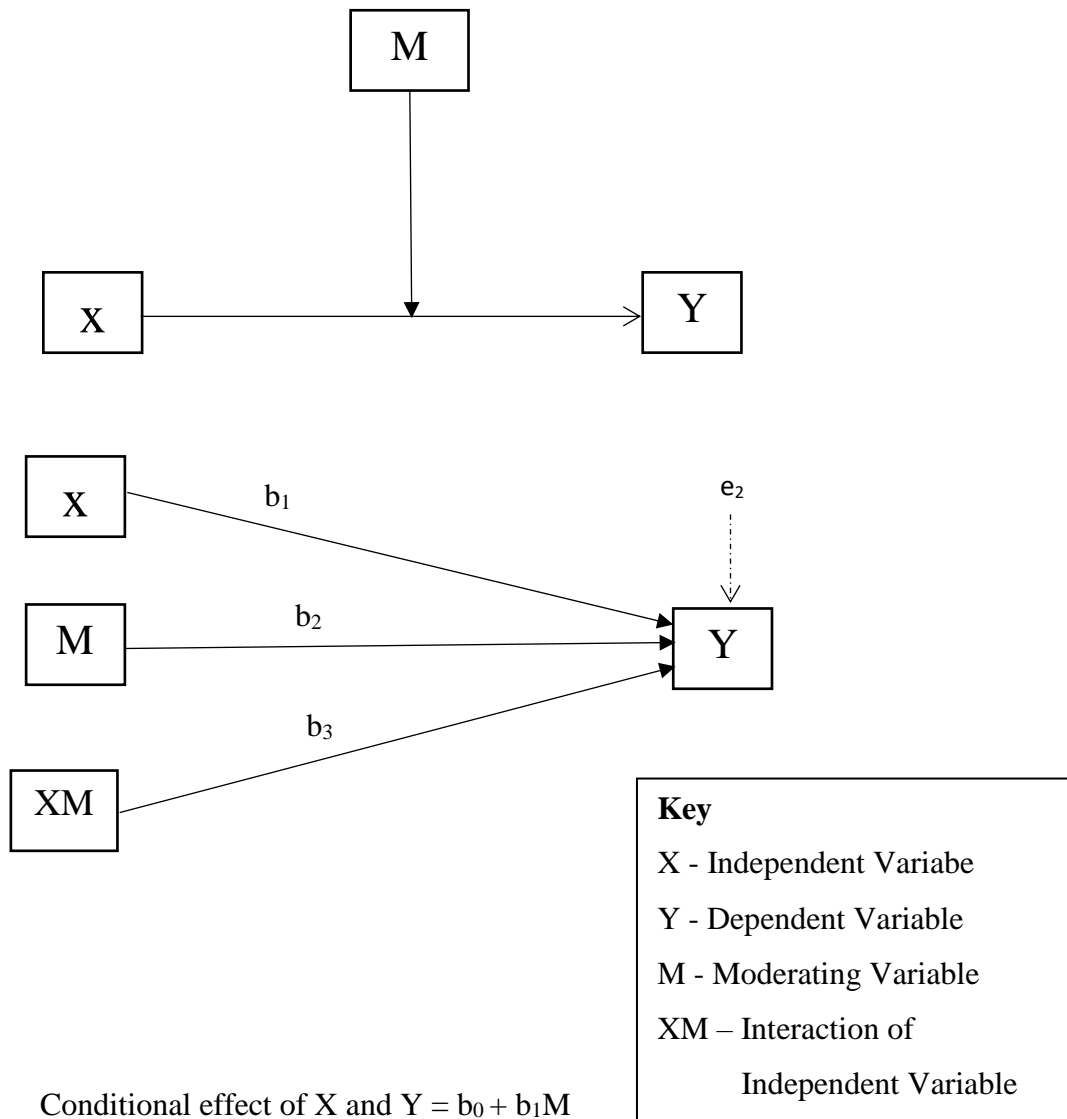


Figure 3.2: Interactions Plots

Source: Hayes (2014)

3.9.5 Assumptions of Regression Model

All assumptions of linear regression were checked. These included: whether residuals are normally distributed, the independent variables are not highly correlated with each other and that the variance of error terms are similar across the values of the independent variables (homoscedasticity). Homoscedasticity states that the variance of error terms is similar across the values of the independent variables. A plot of standardized residuals versus predicted values was visually inspected to show whether points were equally distributed across all values of the independent variables. Ferranna,

et al., (2015) added that the linear regression analysis requires that the errors between observed and predicted values (i.e., the residuals of the regression) should be normally distributed. This assumption may be checked by looking at a histogram or a Q-Q-Plot. Linear regression assumes that there is no multicollinearity in the data. Multicollinearity occurs when the independent variables are too highly correlated with each other.

The resulting data analysis from questionnaires and interview schedules were summarized and depicted in the form of frequency tables and bar graphs (Burns & Grove, 2005). Outputs from SPSS on factor analysis, correlation and multiple regression analysis are put in this thesis as they appeared in the software output interface.

3.10 Research Study Findings Dissemination

The research findings will be disseminated to all anticipated beneficiaries in form of research summary document and policy briefs. The Government of Kenya being a major stakeholder will receive the findings in a policy brief form while the rest of the stakeholders will receive in form of research summary document, which will be emailed to those who are connected with internet and mailed to those not connected.

3.11 Limitations of the Study

According to Escudier, *et al.*, (2014) sample size is dictated by the type of research problem you are investigating. If the sample size is too small, it will be difficult to find significant relationships from the data, as statistical tests normally require a larger sample size to ensure a representative distribution of the population and to be considered representative of groups of people to whom results will be generalized or transferred. The study did not attain 100% response rate because health institutions

which formed the study's target population, the respondents tend to be quite engaged and with limited time if any to respond to questionnaires. This limitation was handled by making it possible to drop the questionnaires and pick them within the week. Ultimately, 84% response was realized which was within the acceptable limits.

Singh, (2015) noted that lack of prior research studies on the topic. Citing prior research studies forms the basis of your literature review and helps lay a foundation for understanding the research problem you are investigating. There was paucity of data on the effect of hospital characteristics on relationship with finance and service quality but the searcher borrowed a leaf from related studies in financing strategies and service quality in service industry.

Åkesson, *et al.*, (2014) was for the opinion that access to people, organizations, or documents and, for whatever reason, access is denied or limited in some way, the reasons for this needs to be described. The study being carried out when healthcare services had been devolved, encountered new research rules in different counties. Even though the researcher had received research clearance from NACOSTI, the researcher was forced to seek for clearance in every county health departments. This was majorly mitigated by applying for permission for research from Council of Governors office which was accepted by most of the counties and where it was not accepted, the researcher had to get specific county clearance.

3.12 Ethical Consideration

The researcher had put into consideration ethical issues related to research, the researcher considered confidentiality of the respondents by coding the questionnaires, and ensuring the respondents gave informed consent after they agree to be in the study out of their own free will. Research clearance letter from Moi University was sought

and used to obtain permission from National Commission for Science and Technology Institute (NACOSTI) and Kenyatta National Hospital and University of Nairobi Ethics and Research Committee (KNH/UoN, ERC) to carry out the study in the health institutions across the country according to the required rules and regulations of the country. The study findings will be disseminated according to Rules and Regulations that Govern Research in the Country.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, presentation and interpretation. It builds a case for the main thesis by analyzing data as obtained from the field. The dependent variable of the study was service quality while the independent variable was financing strategies and the moderating variable is hospital characteristics. The chapter opens with a section on data screening, cleaning and data treatment. The main analytical operations employed herein include the preliminary screening of data which included normality, multicollinearity tests, skewness and kurtosis. After cleaning of the data, demographic description of the respondents was carried out. This was followed by reporting of data pertaining to the research objectives posed in this study. Descriptive and inferential statistics were employed, and findings discussed. The results are presented in the context of the objectives and hypotheses of the study.

4.2 Data Screening and Cleaning

The data screening and cleaning process normally involves an inspection of the collected data and correction (or removal) of any errors that potentially can cause substantial impacts on the analysis results (Osborne, 2013). It often includes an examination of missing values, identification of substantial errors, management of raw data for an appropriate use of the analysis and assessment of normality and outliers (Tabachnick & Fidell, 2014)

4.2.1 Examination of Missing Data

As a first step, the study identified and rectified missing values in the dataset. It is generally suggested that researchers may remove particular cases if they have more than 50 per cent of values missing (Hair, *et al* 2015). These cases can create substantial impacts on the rest of the observations (Tabachnick & Fidell, 2014). Following this suggestion, the study omitted the 3 cases with more than 50 per cent of missing values. After removing these cases, the study also treated the cases with less than 50 per cent of missing values. For the treatment of such missing values, three options are often suggested (Pallant, 2011):

Among these techniques, the study adopted a pairwise exclusion option in consideration of its advantages. The advantages include that the option has fewer problems with convergence; the factor loading estimates are relatively free of bias; and the option is easy to implement by using any statistical program (Hair, *et al.*, 2015).

4.2.2 Treatment of Personal Values Data

The second step of the data screening and cleaning process in this study is the treatment of personal values data (i.e., Schwartz Value Survey [SVS]). Glazer and Beehr (2002) suggest that in order to clearly identify the respondents' most important personal values and use them effectively for the subsequent analyses, it is necessary to remove the cases that contain largely biased responses (e.g., too many 3, 5 or 7 ratings). Following their suggestion, the cases were removed if the responses to personal values questions contained any of the following:

- More than 34 instances of item responses receiving ratings of 3
- More than 22 instances where item responses receive a rating of 5 (i.e., a rating of 0) (Glazer & Beehr, 2002)

After the data cleaning process above, 216 cases remained.

4.2.3 Management of Data for Subsequent Analysis

The third step involved the management of data for subsequent analyses. Specifically, the study first transformed the data collected for personal values. To do this, the study followed the Schwartz's SVS manual, which was directly sourced from the author of this scale, Shalom Schwartz (personal communication, October 25, 2013). As suggested by his manual, all scores for each case were aggregated first. Then, these scores were divided by the total number of items (This is called MRAT (Mean RATING for the particular individual)). Each of the items for an individual were centered on that individual's MRAT. Then, these scores were first computed for the five service quality dimensions (Reliability, Assurance, Tangibility, Empathy and Responsiveness) and the three strategies of financing (Equity, Debt and Networking). The values were further aggregated to one value type for the purpose of analyses (Palfai *et al.*, 2011). This study considered 87% completed responses as an appropriate cut-off point for applying the average score approach.

4.2.4 Assessment of Outliers

An outlier is a point that is far from observing other observations. Scrutinizing outliers is an important step before analysis in order to statistically test for problematic outliers. The study sought to identify any outliers that potentially could cause substantial problems to the analysis. For this purpose, box plots were produced (Tabachnick & Field, 2013). An examination of box plots revealed two extreme point outliers on the conservation variable. These two cases were dropped from further analyses. None of the other observations showed a considerable deviation from the rest of observations. In line with the recommendations of this study used Mahalanobis D^2 measure to identify

and deal with multivariate outliers. Handling multivariate outliers would take care of univariate outliers. However, treating univariate outliers would not necessarily take care of multivariate outliers (Hair *et al.*, 2015). Hence Mahalanobis D^2 was calculated using linear regression methods in SPSS followed by the computation of the chi-square value. Given that 5 items were used, 4 represent the degree of freedom in the chi-square table with $p < 0.001$ Tabachnick and Fidell., (2013). This means that any case with a probability Mahalanobis D^2 value of less than 0.001 is a multivariate outlier and should be removed. Therefore, cases with a value of less than 0.001 were excluded from further analysis.

Table 4.1 Mahalanobis Distance

	Minimum	Maximum	Mean	Std. Dev	N
Mahal. Distance	0.511	4.511	4.043	.981	216

a Dependent Variable: delivery of quality health care service

Source: Research Data, (2017)

4.2.5 Response Rate

Response rate is the percentage of all questionnaires returned. A total of 932 questionnaires from 233 hospitals questionnaires were distributed and a total of 814 were returned. This means that 118 questionnaires were not return, wrongly marked or had outliers. This resulted in a response rate of 87%, which was quite adequate for the study. However, for further analysis questionnaires from same hospital were averaged as one giving a response rate of 216 hospitals out of 233 hospitals. This gives a response rate of 92.7%. Babbie (1990) stated that a response rate of 50% or more is adequate for a study. Hence, a response rate of 92.7%, taking cognizance of the nature of the study, is quite sufficient.

Table 4.2: Response Rate of Questionnaires

Responses	No.	Percentages
Administered questionnaires	932	100%
Returned	814	87%
Non-Usable questionnaires	118	13%

Source: Research Data (2017)

4.3 Demographic Information

As indicated by the table 4.3 below, in terms of the age of the hospitals the majority were above 40 years as indicated by (36.6%), followed by those that were between 31-40 years (32.4%), 11-20 years of age (15.3%), 21-30 years of age (12.5%) and 1-10 years of age (3.2%). The results suggest that most of the hospitals had operated above 40 years within the health sector. The results also indicated that, most of the hospitals' bed capacity ranged between 50-99 (31.5%), while those with the least number of hospitals were those with above 300 beds (6.0%). In terms of facility level, it is evident from the table below that majority of the hospitals interviewed were from level 4 as indicated by (74%), with the minority from level 6 (3.2%). Finally, the results showed that majority of the hospitals interviewed were government or public hospitals (60.2%), while minority were from faith-based hospitals (15.7%)

Table 4.3: Response by Hospitals

		Frequency	Percent
Hospital age	1-10 years	7	3.2
	11-20 years	33	15.3
	21-30 years	27	12.5
	31-40 years	70	32.4
	above 40 years	79	36.6
	Total	216	100
Hospital bed capacity	0-49	59	27.3
	50-99	68	31.5
	100-199	39	18.1
	200-299	37	17.2
	Above 300	13	6.0
	Total	216	100
Facility level	Level 4	160	74.1
	Level 5	49	22.7
	Level 6	7	3.2
	Total	216	100
Type of hospital	Government/public	130	60.2
	Private	52	24.1
	Faith based	34	15.7
	Total	216	100

Source: Research Data, (2017)

4.4 Hospital Age against Financing Strategies and Service Quality

The results presented in Table 4.4 shows that hospitals that were between 31-40 years of operation had the highest mean on equity financing with a mean ($M=3.386$, $SD=0.479$), while those above 40 years of operations had the lowest mean in equity financing with mean of ($M=3.188$, $SD=0.408$). To find out if there is a significant difference between hospital age and equity financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital age and equity financing ($F = 2.033$, $p = .091$). This shows that equity financing not dependent on hospital age.

Further the results shows that hospitals with the age between 1-10 years had the highest mean in debt financing with a mean ($M=3.127$, $SD=0.371$) while those above 40 years had the lowest mean in debt financing with mean of ($M=2.723$, $SD=0.759$). To find out

if there is a significant difference between hospital age and debt financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital age and debt financing ($F = 2.346$, $\rho = .056$). This shows that debt financing not dependent on hospital age.

Consequently, the results shows that hospitals with the age between 1-10 years had the highest mean in network financing with a mean ($M=3.980$, $SD=0.484$) while those above 40 years had the lowest mean in network financing with mean of ($M=3.478$, $SD=0.646$). To find out if there is a significant difference between hospital age and network financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between hospital age and network financing ($F = 2.638$, $\rho = .035$). This shows that network financing is dependent on hospital age.

Finally, the results shows that hospitals with the age between 1-10 years had the highest mean in service quality with a mean ($M=3.934$, $SD=0.306$) while those between 31-40 years had the lowest mean in debt financing with mean of ($M=3.791$, $SD=0.454$). To find out if there is a significant difference between hospital age and service quality, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital age and service quality ($F = 0.643$, $\rho = .633$). This shows that service quality is not dependent on hospital age.

Table 4.4: Hospital Age against Financing Strategies and Service Quality

		Descriptive			ANOVA	
		N	Mean	Std. Deviation	F	Sig.
Equity Financing	1-10 years	7	3.198	0.249	2.033	0.091
	11-20 years	33	3.322	0.445		
	21-30 years	27	3.230	0.507		
	31-40 years	70	3.386	0.479		
	above 40 years	79	3.188	0.408		
	Total	216	3.278	0.452		
Debt Financing	1-10 years	7	3.127	0.371	2.346	0.056
	11-20 years	33	2.963	0.771		
	21-30 years	27	3.066	0.748		
	31-40 years	70	3.065	0.796		
	above 40 years	79	2.723	0.759		
	Total	216	2.926	0.773		
Network Financing	1-10 years	7	3.980	0.484	2.638	0.035
	11-20 years	33	3.619	0.560		
	21-30 years	27	3.675	0.470		
	31-40 years	70	3.719	0.474		
	above 40 years	79	3.478	0.646		
	Total	216	3.619	0.564		
Service Quality	1-10 years	7	3.934	0.306	0.643	0.633
	11-20 years	33	3.848	0.516		
	21-30 years	27	3.928	0.323		
	31-40 years	70	3.791	0.454		
	above 40 years	79	3.863	0.399		
	Total	216	3.848	0.426		

Source: Research Data, (2017)

4.5 Facility Type against Financing Strategies and Service Quality

Table 4.5 shows that private hospitals exhibited the highest mean on equity financing with a mean ($M=3.499$, $SD=0.392$), while those in government sector had the lowest mean in equity financing with mean of ($M=3.161$, $SD=0.456$). To find out if there is a significant difference between facility type and equity financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between facility type and equity financing ($F=12.949$, $p=.000$). This shows that equity financing is dependent on facility type.

Further, private hospitals presented the highest mean on debt financing with a mean ($M=3.485$, $SD=0.513$), while those in government sector had the lowest mean in debt financing with mean of ($M=2.697$, $SD=0.760$). To find out if there is a significant difference between facility type and debt financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between facility type and debt financing ($F =23.376$, $\rho= .000$). This shows that debt financing is dependent on facility type.

Additionally, the results show that private hospitals exhibited the highest mean on network financing with a mean ($M=3.743$, $SD=0.445$), while those in faith-based sector had the lowest mean in network financing with mean of ($M=3.563$, $SD=0.680$). A one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between facility type and network financing ($F =1.692$, $\rho= .187$). This shows that network financing is not dependent on facility type.

Finally, the results show that faith-based hospitals exhibited the highest mean on service quality with a mean ($M=4.032$, $SD=0.396$), while those in government/public sector had the lowest mean in service quality with mean of ($M=3.778$, $SD=0.451$). To find out if there is a significant difference between facility type and service quality, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between facility type and debt financing ($F =5.631$, $\rho= .004$). This shows that service quality is dependent on facility type.

Table 4.4: Facility Type against Financing Strategies and Service Quality

		N	Descriptive		ANOVA	
			Mean	Std. Deviation	F	Sig.
Equity Financing	Government/public	130	3.161	0.456	12.949	0.000
	Private	52	3.499	0.392		
	Faith based	34	3.390	0.370		
	Total	216	3.278	0.452		
Debt Financing	Government/public	130	2.697	0.760	23.376	0.000
	Private	52	3.485	0.513		
	Faith based	34	2.951	0.725		
	Total	216	2.926	0.773		
Network Financing	Government/public	130	3.584	0.571	1.692	0.187
	Private	52	3.743	0.445		
	Faith based	34	3.563	0.680		
	Total	216	3.619	0.564		
Service Quality	Government/public	130	3.778	0.451	5.631	0.004
	Private	52	3.903	0.329		
	Faith based	34	4.032	0.396		
	Total	216	3.848	0.426		

Source: Research Data, (2017)

4.6 Hospital Level against Financing Strategies and Service Quality

The results from table 4.6 shows that hospitals from level 4 exhibited the highest mean on equity financing with a mean ($M=3.296$, $SD=0.474$), while those in level 6 had the lowest mean in equity financing with mean of ($M=3.078$, $SD=0.296$). To find out if there is a significant difference between hospital level and equity financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital level and equity financing ($F=1.404$, $p=.248$). This shows that equity financing is not dependent on hospital level.

Consequently, hospitals from level 6 exhibited the highest mean on debt financing with a mean ($M=2.992$, $SD=0.524$), while those in level 4 had the lowest mean in debt financing with mean of ($M=2.906$, $SD=0.821$). To find out if there is a significant difference between hospital level and debt financing, a one-way analysis of variance

(ANOVA) was performed. The results showed that there was no statistically significant difference between hospital level and debt financing ($F = 0.185, \rho = .831$). This shows that debt financing is not dependent on hospital level.

Additionally, the results show that hospitals from level 5 exhibited the highest mean on network financing with a mean ($M=3.694, SD=0.445$), while those in level 6 had the lowest mean in network financing with mean of ($M=3.429, SD=0.564$). To find out if there is a significant difference between hospital level and network financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital level and network financing ($F = 1.189, \rho = .307$). This shows that network financing is not dependent on hospital level.

Finally, the results show that hospitals from level 5 exhibited the highest mean on service quality with a mean ($M=3.904, SD=0.459$), while those in level 6 had the lowest mean in service quality with mean of ($M=3.797, SD=0.375$). To find out if there is a significant difference between hospital level and service quality, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between hospital level and equity financing ($F = 0.604, \rho = .548$). This shows that service quality is not dependent on hospital level.

Table 4.5: Hospital Level against Financing Strategies and Service Quality

		Descriptive			ANOVA	
		N	Mean	Std. Deviation	F	Sig.
Equity Financing	Level 4	160	3.296	0.474	1.404	0.248
	Level 5	49	3.275	0.403		
	Level 6	7	3.078	0.296		
	Total	216	3.278	0.452		
Debt Financing	Level 4	160	2.906	0.821	0.185	0.831
	Level 5	49	2.973	0.675		
	Level 6	7	2.992	0.524		
	Total	216	2.926	0.773		
Network Financing	Level 4	160	3.611	0.596	1.189	0.307
	Level 5	49	3.694	0.445		
	Level 6	7	3.429	0.564		
	Total	216	3.619	0.564		
Service Quality	Level 4	160	3.834	0.419	0.604	0.548
	Level 5	49	3.904	0.459		
	Level 6	7	3.797	0.375		
	Total	216	3.848	0.426		

Source: Research Data, (2017)

4.7 Bed Capacity against Financing Strategies and Service Quality

The results from table 4.7 shows that hospitals with bed capacity of between 50-99 exhibited the highest mean on equity financing with a mean ($M=3.367$, $SD=0.446$), while those with bed capacity of between 0-49 had the lowest mean in equity financing with mean of ($M=3.159$, $SD=0.549$). To find out if there is a significant difference between bed capacity and equity financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between bed capacity and equity financing ($F=1.876$, $p=.116$). This shows that equity financing is not dependent on bed capacity.

From the results in the table below, hospitals with bed capacity of above 300 portrayed the highest mean on debt financing with a mean ($M=3.429$, $SD=0.360$), while those with bed capacity of between 0-49 had the lowest mean in debt financing with mean of ($M=2.705$, $SD=0.835$). To find out if there is a significant difference between bed

capacity and debt financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between bed capacity and debt financing ($F = 3.784, \rho = .005$). This shows that debt financing is dependent on bed capacity.

In addition, the results show that hospitals with bed capacity of between 100-199 exhibited the highest mean on network financing with a mean ($M = 3.713, SD = 0.467$), while those with bed capacity of above 300 had the lowest mean in network financing with mean of ($M = 3.520, SD = 0.603$). To find out if there is a significant difference between bed capacity and network financing, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between bed capacity and network financing ($F = 0.805, \rho = .523$). This shows that network financing is not dependent on bed capacity.

Finally, the results show that hospitals with bed capacity of above 300 exhibited the highest mean on service quality with a mean ($M = 4.006, SD = 0.345$), while those with bed capacity of between 0-49 had the lowest mean on service quality with mean of ($M = 3.794, SD = 0.520$). To find out if there is a significant difference between bed capacity and service quality, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between bed capacity and service quality ($F = 0.573, \rho = .683$). This shows that service quality is not dependent on bed capacity.

Table 4.6: Bed capacity against Financing Strategies and Service Quality

		N	Descriptive		ANOVA	
			Mean	Std. Deviation	F	Sig.
Equity Financing	0-49	61	3.159	0.549	1.876	0.116
	50-99	65	3.367	0.446		
	100-199	40	3.294	0.327		
	200-299	37	3.290	0.380		
	Above 300	13	3.352	0.320		
	Total	216	3.278	0.452		
Debt Financing	0-49	61	2.705	0.835	3.784	0.005
	50-99	65	3.142	0.800		
	100-199	40	2.936	0.594		
	200-299	37	2.808	0.718		
	Above 300	13	3.429	0.360		
	Total	216	2.926	0.773		
Network Finance	0-49	61	3.537	0.609	0.805	0.523
	50-99	65	3.666	0.543		
	100-199	40	3.713	0.467		
	200-299	37	3.591	0.615		
	Above 300	13	3.520	0.603		
	Total	216	3.619	0.564		
Service Quality	0-49	61	3.794	0.520	0.573	0.683
	50-99	65	3.871	0.356		
	100-199	40	3.872	0.421		
	200-299	37	3.843	0.385		
	Above 300	13	4.006	0.345		
	Total	216	3.848	0.426		

Source: Research Data, (2017)

4.8 Descriptive Statistics

4.8.1 Ex-Chequer

The results on equity financing are presented in table 4.8. Most of the respondents indicated that there are increased funds for health care in government budget allocations as shown by (mean = 3.02, SD = .95). Most of the respondents said that increasing budget allocation to the hospital improves the quality of healthcare as indicated by (mean = 3.91, SD = .89). Mean (M=2.69, SD = .92) of the respondents agree that Government provides adequate funds for recurrent expenditure. In addition, mean (M=2.95, SD = 1.03) of the respondents agree that their hospital is able to promote its employees as and when it's due.

Further, most of the respondents agree that effecting staff promotions when its due improves the quality of healthcare services as indicated by (mean = 3.99, SD = .80). In addition, mean (M= 2.65, SD = .90) of the respondents agree that the Government provides adequate development funds. Further, most of the respondents agree that hospitals ability to procure all the critical equipment as and when they are required improves quality of healthcare services as given by (M=3.83, SD=0.92). Mean 2.30 of the respondents agree that The Government disburses monthly funds. Majority of the respondents agree that allocated funds by the government are used to improve quality of healthcare services as indicated by (M=3.54, SD=0.95).

Furthermore, most of the respondents agree that Government financed services for under-fives is adhered to in the hospitals as shown by (M=3.30, SD=0.99). Most respondents agree that Government financed services impacts positively on the quality of healthcare as indicated by (M=3.61, SD=0.90). The majority of respondents indicated that funds allocated by the government to the hospitals has improved quality of healthcare service as shown by (M=3.39, SD=0.91). In addition, mean (M=3.23, SD=.0.92) of the respondents agree that There is increased support on healthcare delivery from the county governments. Further, most of the respondents agree that Increased healthcare support from the County Governments has improved the quality of healthcare services as indicated by (mean = 3.25, SD = .91).

Generally, equity financing culminated a mean of 3.27 which indicates that equity financing is averagely used in the health sector. The standard deviations range from .80 to 1.03 with an overall SD of .52. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution.

Table 4.7: Ex-Chequer

n=21	Min	Max	Mean	Std	Skew	Kurt
There are increased funds for health care in government budget	1	5	3.02	0.95	-0.46	-0.68
Increasing budget allocation to the hospital improves the quality of health	1	5	3.91	0.89	-1.54	2.61
The Government provides adequate funds for recurrent	1	5	2.69	0.92	0	-0.77
The hospital is able to promote its employees as and when its due	1	5	2.95	1.03	-0.14	-0.67
Effecting staff promotions when its due improves the quality of healthcare services	1	5	3.99	0.8	-1.62	3.72
The Government provides adequate development funds	1	5	2.65	0.9	0.15	-0.46
Government development funds has continuously increased over the years	1	5	3.02	0.93	-0.41	-0.37
The hospital is able to procure all the critical equipment as and when they are required	1	5	2.85	1.03	-0.04	-0.83
Hospital ability to procure all the critical equipment as and when they are required improves quality of healthcare services	1	5	3.83	0.92	-1.23	1.41
The Government disburses monthly funds promptly	1	5	2.3	0.82	0.7	0.47
The Government promptly refunds the free maternity expenditure	1	5	2.64	0.97	0.04	-0.84
Allocated funds by the government are used to improve quality of healthcare services	1	5	3.54	0.95	-1.17	0.87
Government financed services for under-fives is adhered	1	5	3.3	0.99	-0.42	-0.31
Government financed services for under-fives enable delivery of quality healthcare	1	5	3.66	0.89	-1.34	1.72
Government financed services impacts positively on the quality of healthcare	1	5	3.61	0.9	-1.21	1.26
The funds allocated to the hospital has improved quality of healthcare service	1	5	3.39	0.91	-1.01	0.79
Government devolved funds have improved the quality of healthcare services	1	5	3.29	0.93	-0.86	0.44
There is increased support on healthcare delivery from the county governments	1	5	3.23	0.92	-0.5	-0.3
Increased healthcare support from the County Governments has improved the quality of healthcare services	1	5	3.25	0.91	-0.51	-0.21
Composite mean	1	4.42	3.27	0.52	-0.81	1.38

Source: Research Data, (2017)

4.8.2 Out of Pocket

According to the results in table 4.9, most of the respondents indicated that the hospitals collect all revenue due to the hospital from the clients/patients as shown by (mean = 3.62, SD = .92). Most of the respondents also indicated that Collection of all revenue due

to the hospital from clients/patients, improves the quality of healthcare services as shown by (mean = 3.72, SD = .88). Mean (M=2.25, SD = .94) of the respondents agree that all patients are able to pay their bills from their own pockets. In addition, mean (M=3.08, SD = .99) of the respondents agree that when patients make payments from their own pockets it enables delivery of efficient and quality healthcare services. Generally, out of pocket crowned a mean of 3.21 which indicates that out of pocket as method of payment is majorly very important to enable efficiency in terms of health services delivery. The standard deviations range from .88 to .99 with an overall SD of .67. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.9 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005).

Table 4.8: Out of Pocket

n=216	Min	Max	Mean	Std	Skew	Kurt
The hospital collects all revenue due to the hospital from the clients/patients	1	5	3.62	0.92	-1.02	0.63
Collection of all revenue due to the hospital from clients/patients, improves the quality of healthcare services	1	5	3.72	0.88	-0.93	0.49
Out of pocket payments is afforded by all patients	1	5	2.25	0.94	0.8	0.17
Out of pocket payments enable delivery of efficient and quality healthcare services	1	5	3.08	0.99	-0.32	-0.53
Composite mean	1	4.01	3.21	0.67	-0.09	0.88

Source: Research Data, (2017)

4.8.3 Insurance

The results on insurance are presented in table 4.10. Most of the respondents indicated that Insurance funding improves the delivery of quality healthcare services as shown by (mean = 3.84, SD = .82). Most of the respondents also said that accessibility of insurance by most patients improves the quality of healthcare services as indicated by (mean

= 3.70, SD = .86). Mean (M=2.14, SD = .81) of the respondents agree that private insurance sources can be accessed by most patients.

In addition, mean (M=3.70, SD = .83) of the respondents agree that reliability of insurance sources of funding improves the quality of healthcare services. Further, most of the respondents agree that Private insurance funds are reliable sources for paying healthcare services as indicated by (mean = 3.33, SD = .91). In addition, mean (M= 3.86, SD = .72) of the respondents agree that increased NHIF financing improves the quality of healthcare services.

Further, most of the respondents indicated that timely NHIF reimbursements improves the quality of healthcare services as given by (M=3.74, SD=0.78). Mean 2.91 and standard deviation 0.99 of the respondents agree that most patients have NHIF insurance. Majority of the respondents agree that adequate coverage of costs by NHIF improves the quality of healthcare services as indicated by (M=3.76, SD=0.82).

Furthermore, most of the respondents agree that NHIF equal treatment to all beneficiaries improves the quality of healthcare services as shown by (M=3.74, SD=0.81). Most respondents agree that accessibility of community pooled funding by most patients is reliable for paying service charges and improves quality of healthcare services as indicated by (M=3.10, SD=0.91). The majority of respondents indicated that reliability of community funding sources for paying user service charges improves quality of healthcare services as shown by (M=3.12, SD=0.89)

In addition, mean (M=3.23, SD = .091) of the respondents agree that community pooled funding payment for part of medical services of improves quality of healthcare services. Further, most of the respondents agree that community involvement has

helped subsidize costs and improve the quality of healthcare services as indicated by (mean = 3.21, SD = .88).

Generally, insurance culminated a mean of 3.36 which indicates that insurance is majorly used in the health sector. The standard deviations range from .72 to 1.03 with an overall SD of .49. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.8 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to equity financing in the health sector, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Joanes & Gill, 1998).

Table 4.9: Insurance

n=216	Min	Max	Mean	Std	Skew	Kurt
Insurance funding improves the delivery of quality healthcare services	1	5	3.84	0.82	-1.49	2.85
Private insurance sources can be accessed by most patients	1	5	2.14	0.81	0.88	0.9
Accessibility of insurance by most patients improves the quality of healthcare services	1	5	3.7	0.86	-1.13	1.35
Private insurance funds are reliable sources for paying healthcare services	1	5	3.33	0.91	-0.64	0.17
Reliability of insurance sources of funding improves the quality of healthcare services	1	5	3.7	0.83	-1.19	1.08
There is increased group insurance (NHIF) financing	1	5	3.8	0.75	-1.26	2.3
Increased NHIF financing improves the quality of healthcare services	1	5	3.86	0.72	-1.11	1.69
NHIF reimbursements are always paid on time hence reliable	1	5	3.04	0.94	-0.28	-0.53
Timely NHIF reimbursements improves the quality of healthcare services	1	5	3.74	0.78	-1.2	1.34
Most patients have NHIF insurance	1	5	2.91	0.99	-0.12	-0.93
Accessibility by most patients to NHIF funding improves the quality of healthcare services	1	5	3.79	0.82	-1.41	2.18
NHIF reimbursements adequately cover the cost of services provided	1	5	3.03	1.03	-0.29	-0.87
Adequate coverage of costs by NHIF improves the quality of healthcare services	1	5	3.76	0.82	-1.68	3.12
NHIF insurance provides equal cover and treatment to all beneficiaries	1	5	3.35	0.91	-0.72	0.4
NHIF equal treatment to all beneficiaries improves the quality of healthcare services	1	5	3.74	0.81	-1.42	2.39
Community pooled funding can be accessed by most patients	1	5	2.7	0.89	0.04	-0.52
Accessibility of community pooled funding by most patients improves quality of healthcare services	1	5	3.1	0.91	-0.61	-0.07
Community pooled funding are reliable sources for paying user service charges	1	5	2.81	0.93	-0.17	-0.71
Reliability of community funding sources for paying user service charges improves quality of healthcare services	1	5	3.12	0.89	-0.79	-0.1
Community pooled funding only part of the cost of medical services	1	5	3.11	0.89	-0.81	-0.01
Community pooled funding payment for part of medical services of improves quality of healthcare services	1	5	3.23	0.91	-0.99	0.24
Community support fund has helped improve service delivery	1	5	3.12	0.93	-0.7	-0.29
Community involvement has helped subsidize costs and improve the quality of healthcare services	1	5	3.21	0.88	-0.82	0.03
Composite mean Insurance	1	4.35	3.36	0.49	-1.28	3.37
Composite mean (Equity Financing)	1.31	4.45	3.28	0.45	-0.94	2.96

Source: Research Data, (2017)

4.8.4 Debt Financing

The results on debt financing as presented in table 4.11, shows that most of the respondents indicated that the hospital can easily access bank overdraft services and is aimed at improving healthcare service delivery services as shown by (mean = 3.01, SD = .99). Most of the respondents also said that the Government readily guarantees the Hospital development loans which improves the quality of healthcare services and are aimed at improving quality of services as indicated by (mean = 3.22, SD = .91).

In addition, mean (M=3.00, SD = .95) of the respondents agree that hospitals can easily access the direct bank loans to fund recurrent activities which essentially improves the quality of healthcare services. Further, most of the respondents indicated that Hospitals can access the direct bank loans to fund the development projects which improves the quality of healthcare services as given by (M=3.11, SD=0.97).

Generally, debt financing culminated a mean of 2.93 which indicates that debt financing is majorly used in the health sector. The standard deviations range from .90 to .99 with an overall SD of .77. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.11 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to debt financing in the health sector, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Joanes & Gill, 1998).

Table 4.10: Debt Financing

n=216	Min	Max	Mean	Std	Skew	Kurt
The hospital can easily access bank overdraft services	1	5	2.7	0.99	-0.22	-0.68
The Bank Overdraft is aimed at improving healthcare service delivery	1	5	3.01	0.99	-0.65	-0.44
The Government readily guarantees the Hospital development loans	1	5	2.37	0.9	0.44	-0.31
Government guaranteed loans improves the quality of healthcare services	1	5	3.03	0.94	-0.6	-0.33
Government guaranteed loans are aimed at improving quality of services	1	5	3.22	0.91	-0.71	0.26
The hospital can easily access the direct bank loans to fund recurrent activities	1	5	2.67	0.94	-0.06	-0.65
Funding recurrent activities with direct bank loans improves the quality of healthcare services	1	5	3	0.95	-0.38	-0.33
The Hospital can access the direct bank loans to fund the development projects	1	5	2.76	0.98	-0.25	-0.92
Funding development projects using direct loans improve the quality of healthcare services	1	5	3.11	0.97	-0.54	-0.37
Composite mean (Debt Financing)	1	4.33	2.93	0.77	-0.74	0.13

Source: Research Data, (2017)

4.8.5 Network Financing

The results on network financing are presented in table 4.12. most of the respondents indicated that Non-governmental organizations contribute funds that support the delivery of health care which improves the quality of healthcare services as shown by (mean = 3.77, SD = .88). Most of the respondents also said that readily availability of Non-Governmental organizations funding improves the quality of healthcare services as indicated by (mean = 3.58, SD = .88).

In addition, mean (M=3.67, SD = .84) of the respondents agree that special contributions by the NGOs subsidizes healthcare costs incurred Special costs which in long-run improves the quality of healthcare services. Further, most of the respondents agree that Most research activities are funded by Partners which in turn improves the quality healthcare services as indicated by (mean = 3.59, SD = .84). In additional, (M= 3.74, SD = .76) of the respondents agree that research firms have enabled improvement of healthcare service

delivery. Most of the respondents indicated that donor funded projects are adequately funded, which are aimed at improving quality of healthcare services as indicated by (M=3.97, SD=0.61). Generally, network financing crowned a M =3.62 which indicates that network financing is majorly used in the health sector. The standard deviations range from .61 to .95 with an overall SD of .56.

Table 4.11: Network Financing

n=216	Min	Max	Mean	Std	Skew	Kurt
Financial networks are the main source of funding the hospital	1	5	3.13	0.95	-0.41	-0.58
Non-governmental organizations contribute funds that support the delivery of health care	1	5	3.65	0.86	-1.51	2.14
Non-governmental organizations funds improve the quality of healthcare services	1	5	3.77	0.88	-1.62	2.58
Non-governmental organizations are always there to support healthcare service delivery	1	5	3.06	0.92	-0.15	-0.36
Readily availability of Non-Governmental organizations funding improves the quality of healthcare services	1	5	3.58	0.88	-1.26	1.12
Special contributions by the NGOs subsidizes healthcare costs incurred	1	5	3.61	0.87	-1.35	1.42
Special costs subsidies by the NGOs improves quality of healthcare services	1	5	3.67	0.84	-1.63	2.31
Most research activities are funded by Partners	1	5	3.66	0.81	-1.73	3.22
Research funding by partners improves the quality healthcare services	1	5	3.79	0.78	-1.92	4.66
The research firms are always supportive in terms of healthcare services delivery	1	5	3.59	0.84	-1.58	2.38
Research firms have enabled improvement of healthcare service delivery	1	5	3.74	0.76	-1.98	4.42
The donor funded projects are adequately funded	1	5	3.21	0.85	-0.62	-0.07
Donor funds have improved the quality of healthcare services	1	5	3.73	0.8	-1.63	2.83
Donor funded projects are aim at improving quality of healthcare services	1	5	3.97	0.61	-2.42	9.85
Composite mean (Network Financing)	1	4.93	3.62	0.56	-1.51	1.5

Source: Research Data, (2017)

4.8.6 Service Quality

4.8.6.1 Expected Service Quality

The results on expected service quality are presented in table 4.13. most of the respondents indicated that hospitals have up to date equipment, physical facilities are visually appealing, employees are well dressed and appear neat, the appearance of the physical facilities are in line with the type of services provided, promises are kept by many hospitals, empathy and reassurance for a certain problem is shown and most of the hospitals are dependable as shown by (M = 3.83, SD = .74). In addition, (M=3.88, SD = .85) of the respondents agree that hospitals provide their services at the time they promise to do so, they keep their records accurately and they tell customers exactly when services will be performed.

Further, most of the respondents agree that clients receive prompt services from the hospital's employees, employees from these Hospitals are always willing to help customers and employees from these Hospitals are not too busy to respond to customer requests promptly as indicated by (M = 3.86, SD = .80). In additional, (M= 3.95, SD = .65) of the respondents agree that clients can trust the employees of these hospitals, clients feel safe in your transactions with the hospital's employees, employees from these Hospitals are polite and employees get adequate support from these Hospital to do their jobs well.

Further, most of the respondents indicated that Hospitals gives clients individual attention, employees of these Hospital know what client's needs are, the Hospital have your interests at heart and they also have operating hours convenient to all their customers as indicated by (M=3.88, SD=0.66). Generally, expected service quality capped a M= 3.88 which indicates that service quality is very important in the health sector. The standard deviations range from .77 to 1.09 with an overall SD of .74.

Table 4.12: Expected Service Quality

n=216	Min	Max	Mean	Std	Skew	Kurt
The hospital has up to date equipment	1	5	3.55	1.08	-0.71	-0.63
The hospital's physical facilities are visually appealing	1	5	3.85	0.85	-1.13	1.72
The Hospital's employees are well dressed and appear neat	1	5	4.08	0.85	-1.07	1.13
The appearance of the physical facilities of this Hospital is in keeping with the type of services provided	1	5	3.77	0.97	-0.92	0.21
When this hospital promises to do something by a certain time, it does so	1	5	3.72	1.03	-0.63	-0.46
When you have a problem, this hospital is sympathetic and reassuring	1	5	3.77	1.07	-0.62	-0.49
This hospital is dependable	1	5	3.81	1.05	-0.83	-0.15
Tangibility	1	5	3.83	0.74	-0.74	0.3
The hospital provides its services at the time it promises to do so	1	5	3.86	1.09	-0.87	-0.16
The Hospital keeps its records accurately	1	5	3.99	0.88	-0.8	0.68
This Hospital tells customers exactly when services will be performed	1	5	3.77	1	-0.74	-0.29
Reliability	1	5	3.88	0.85	-0.65	-0.31
You receive prompt services from the employees of this hospital	1	5	3.76	1.04	-0.92	0.02
Employees of this Hospital are always willing to help customers	1	5	3.96	1.01	-1.43	1.74
Employees of this Hospital are not too busy to respond to customer requests promptly	1	5	3.87	0.96	-1.16	1.2
Responsiveness	1	5	3.86	0.8	-0.94	0.75
You can trust the employees of this hospital	1	5	4.02	0.68	-1.11	3.14
You feel safe in your transactions with this hospital's employees	1	5	4.08	0.77	-1.06	2.14
Employees of this Hospital are polite	1	5	3.96	0.95	-1.18	1.32
Employees get adequate support from this Hospital to do their jobs well	1	5	3.74	0.93	-0.55	-0.15
Assurance	1.5	5	3.95	0.65	-0.84	1.37
The Hospital gives you individual attention	1	5	3.95	0.87	-0.97	0.96
Employees of this Hospital gives your personal attention	1	5	3.97	0.89	-1.13	1.35
Employees of this Hospital know what your needs are	1	5	3.63	1.02	-0.52	-0.57
The Hospital have your interests at heart	1	5	3.79	0.94	-0.74	0.3
The Hospital has operating hours convenient to all their customers	1	5	4.05	0.95	-1.21	1.3
Empathy	1	5	3.88	0.74	-0.53	0.42
Composite mean (Expected service quality)	1.15	5	3.88	0.66	-0.68	0.51

Source: Research Data, (2017)

4.8.6.2 Perceived Service Quality

The results on perceived service quality are presented in table 4.14. most of the respondents indicated that hospitals have up to date equipment, physical facilities are visually appealing, employees are well dressed and appear neat, and the appearance of

the physical facilities are in line with the type of services provided as shown by (mean = 3.58, SD = .70). In addition, mean (M=3.72, SD = .62) of the respondents agree that promises are kept by many hospitals, sympathy and reassurance for a certain problem is shown, most of the hospitals are dependable, hospitals provide their services at the time they promise to do so, and they keep their records accurately.

Further, most of the respondents agree that these hospitals tell customers exactly when services will be performed, clients receive prompt services from the hospital's employees, employees from these Hospitals are always willing to help customers and also employees from these Hospitals are not too busy to respond to customer requests promptly as indicated by (mean = 3.91, SD = .61). In addition, mean (M= 3.95, SD = .59) of the respondents agree that clients can trust the employees of these hospitals, clients feel safe in your transactions with the hospital's employees, employees from these Hospitals are polite and employees get adequate support from these Hospital to do their jobs well.

Further, most of the respondents indicated that Hospitals gives clients individual attention, employees of these Hospital know what client's needs are, the Hospital have your interests at heart and they also have operating hours convenient to all their customers as indicated by (M=3.91, SD=0.61). Generally, expected service quality capped a mean of 3.82 which indicates that service quality is very important in the health sector. The standard deviations range from .55 to .96 with an overall SD of .55.

Table 4.13: Perceived Service Quality

n=216	Min	Max	Mean	Std	Skew	Kurt
The Hospital has up-to-date equipment	1	5	3.01	0.96	0.05	-0.53
The hospital's physical facilities are visually appealing	1	5	3.54	0.91	-0.9	0.31
The Hospital's employees are well dressed and appear neat	1	5	3.93	0.69	-1.37	2.93
The appearance of the physical facilities of this Hospital is in keeping with the type of services provided	1	5	3.68	0.82	-0.97	0.66
Tangibility	1	5	3.58	0.7	-0.4	0.53
When this hospital promises to do something by a certain time, it does so	1	5	3.33	0.9	-0.39	-0.17
When you have a problem, this hospital is sympathetic and reassuring	1	5	3.68	0.78	-1.12	1.2
This hospital is dependable	1	5	3.83	0.71	-1.89	4.95
The hospital provides its services at the time it promises to do so	1	5	3.65	0.77	-1.07	1.01
The Hospital keeps its records accurately	1	5	3.95	0.67	-1.36	2.99
Reliability	1	5	3.72	0.62	-0.75	1.35
This Hospital tells customers exactly when services will be performed	1	5	3.82	0.76	-1.12	1.48
You receive prompt services from the employees of this Hospital	1	5	3.9	0.7	-1.45	3.06
Employees of this Hospital are always willing to help customers	1	5	4.09	0.55	-1.49	6.15
Employees of this Hospital are not too busy to respond to customer requests promptly	1	5	3.72	0.8	-1.16	1.54
Responsiveness	1	5	3.91	0.61	-0.61	2.45
You can trust the employees of this hospital	1	5	4.01	0.62	-1.49	5.22
You feel safe in your transactions with this hospital's employees	1	5	3.97	0.63	-1.07	2.9
Employees of this Hospital are polite	1	5	3.87	0.74	-1.05	1.46
Employees get adequate support from this Hospital to do their jobs well	1	5	3.81	0.79	-1.19	1.49
Assurance	1	5	3.95	0.59	-0.63	2.83
The Hospital gives you individual attention	1	5	3.8	0.73	-1.07	1.34
Employees of this Hosp. gives your pers. atte.	1	5	3.88	0.68	-1.22	2.46
Employees of this Hospital know your needs	1	5	3.8	0.72	-0.94	1.13
The Hospital has operating hours convenient to all their customers	1	5	4.04	0.66	-1.71	5.2
The Hospital have your interests at heart	1	5	3.85	0.71	-0.99	1.56
Empathy	1	5	3.91	0.61	-0.53	1.92
Composite mean (Perceived serv. quality)	1	5	3.82	0.55	-0.55	2.58

Source: Research Data, (2017)

4.9 Reliability

Reliability has been acknowledged in the literature to mean that scores from a research instrument are stable and consistent (Yasar & Cogenli, 2014; Koonce & Kelly, 2014). Given that in this research, semi-structured questionnaires were used as instruments to collect data, it was worth testing for its reliability. Rovai *et al.*, (2013) recommended Cronbach's alpha as an adequate model to measure internal consistency reliability based on the average inter-item correlation of an instrument. The study used Cronbach alpha to check for reliability of the research instruments. The results are presented in Table 4.15 below.

According to Sekeran and Bougie (2010), the conventionally accepted level of reliability measure is set at 0.70. From the results generated, the Cronbach alpha for each variable based on the average of inter-item correlation was above 0.70 with the highest Cronbach alpha value observed in confidence (0.951) whereas the lowest value was (0.618) with respect to service quality of healthcare services in Kenya. Therefore, any Cronbach alpha value of more than 0.70 is regarded as a reliable measure for the construct under consideration. Evidently, the present study results demonstrate that all variables except out of pocket had a Cronbach alpha of more than 0.70. Thus, the results met the required threshold for further analysis as presented in Table 4.15.

Table 4.15: Reliability

	Reliability Statistics		
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Equity Financing	0.923	0.923	46
EX-Chequer	0.872	0.874	19
Out of Pocket	0.618	0.616	4
Insurance	0.891	0.893	23
Debt Financing	0.924	0.924	9
Network Financing	0.901	0.904	14
Expected Service Quality	0.945	0.945	22
Perceived Service Quality	0.951	0.953	22

Source: Research Data, (2017)

4.10 Factor Analysis

Exploratory factor analysis (EFA) was run to examine the multidimensionality among multi-item instrument used in study. Principal component analysis varimax rotation Kaiser Normalisation and eigenvalues applied to the constructs of study. According to Bartholomew *et al.*, (2011) and Williams *et al.*, (2010) Factor analysis refers to the idea that is quantifiable and noticeable variables in the research can be condensed to fewer fundamental variables that share a joint variance and are unobservable. The researcher ran a principal component analysis to identify patterns in data, and to express the data in such a way as to highlight their similarities and differences. Besides having data set items reduced to manageable level while retaining as much of the original information it helped in identifying groups or clusters of variables. On the basis of the criterion of Kaiser (1960), the researcher retained all factors with Eigen values greater than 1. The criterion was based on the idea that the Eigen values represent the amount of variation explained by a factor and that the Eigen value of 1 represents a substantial amount of variation. Sampling adequacy was tested using the Kaiser- Meyer- Olkin Measure (KMO measure) of sampling adequacy. For data to be suitable for factor analysis, the

recommended value for KMO is 0.50 and the Bartlett's Test of Sphericity should be significant ($p < 0.05$) (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). The convergent validity of the research instruments was assessed using Average Variance Extracted (AVE) for all variables (Hair *et al.*, 2014).

4.10.1 Independent Variable

The factor analysis results for Financial Strategies are presented in Table 4.16. The principal component analysis with Varimax rotation was performed to identify the underlying factors of service quality of healthcare services in Kenya. The results depicted that the high factor loading scores showed that all the items explained service quality of healthcare services in Kenya as all items used to measure service quality of healthcare services in Kenya were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). According to Floyd and Widman (1995) Items with loading greater than .40 are considered to be substantial and important. Similarly, Hair *et al.* (1998) suggest factor loading with score .50 and greater as very significant. Following the above criterion factor analysis with help of Principal component analysis (PCA) is carried on and following factors extracted for further confirmatory Factor analysis (CFA) assessment.

The EFA extracted equity financing factor with an Eigen value of 11.101 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 72.67% thus, the equity financing was appropriate to explain the variable. Moreover, from the Table 4.16 below, Bartlett's Test of Sphericity for equity financing produced a significant Chi-Square (χ^2) of 6405.45 ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy was 0.825 above the acceptable value of .50 (Field, 2005),

showing that it was appropriate to subject data for factor analysis on this variable of service quality of healthcare services (Leech *et al.*, 2013).

Further, The EFA extracted debt financing factor with an Eigen value of 5.601 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 72.28% thus debt financing was appropriate to explain the variable. Moreover, from the Table 4.16 below, Bartlett's Test of Sphericity for debt financing produced a significant Chi-Square (χ^2) of 118.242 ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy was 0.867 above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of service quality of healthcare services (Leech *et al.*, 2013).

In addition, the EFA extracted network financing factor with an Eigen value of 6.36 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 73.01% thus, network financing was appropriate to explain the variable. Moreover, from the Table 4.16 below, Bartlett's Test of Sphericity for network financing produced a significant Chi-Square (χ^2) of 1869.11 ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy was 0.855 above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of service quality of healthcare services (Leech *et al.*, 2013).

Table 4.16: Factor Analysis for Independent Variable

	Factor loadings	KMO	%CV	AVE	CR
Equity Financing (Bartlett's Test of Sphericity=6405.45**, Eigen Values=11.101)					
EF1	0.515	0.825	72.67	0.52	0.77
EF2	0.572				
EF3	0.629				
EF4	0.584				
EF5	0.563				
EF6	0.542				
EF7	0.539				
EF8	0.617				
EF9	0.58				
EF10	0.536				
EF11	0.507				
EF12	0.518				
EF13	0.587				
EF14	0.56				
EF15	0.518				
EF16	0.564				
EF17	0.572				
EF18	0.531				
EF19	0.511				
EF20	0.6				
EF21	0.58				
EF22	0.713				
EF23	0.744				
EF24	0.703				
EF25	0.741				
EF26	0.654				
Debt Financing(Bartlett's Test of Sphericity=118.242**, Eigen Values=5.601)					
		0.867	75.28	0.566	0.891
DF1	0.787				
DF2	0.627				
DF3	0.559				
DF4	0.868				
DF5	0.895				
DF6	0.885				
DF7	0.738				
DF8	0.887				
DF9	0.731				
Network Financing(Bartlett's Test of Sphericity=1869.11**, Eigen Values=6.36)					
		0.855	73.01	0.547	0.701
NF1	0.741				
NF2	0.88				
NF3	0.857				
NF4	0.603				
NF5	0.653				
NF6	0.728				
NF7	0.715				
NF8	0.792				
NF9	0.644				
NF10	0.828				
NF11	0.805				
NF12	0.544				
NF13	0.794				
NF14	0.585				

Source: Research Data, (2017)

4.10.2 Dependent Variable

4.10.2.1 Expected Service Quality

The factor analysis results for Innovative work behaviour are presented in Table 4.17. The principal component analysis with Varimax rotation was performed to identify the underlying factors of service quality of healthcare services. The results depicted that the high factor loading scores showed that all the items explained service quality of healthcare services as all items used to measure service quality of healthcare services were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). According to Floyd and Widman (1995) Items with loading greater than .40 are considered to be substantial and important. Similarly, Hair *et al.* (1998) suggest factor loading with score .50 and greater as very significant. Following the above criterion factor analysis with help of Principal component analysis PCA is carried on and following factors extracted for further confirmatory factor analysis (CFA) assessment. The EFA extracted 1 factor with an Eigen value of 10.33 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 64.43%. thus the items was appropriate to explain the variable.

Moreover, from the Table 4.17 below, Bartlett's Test of Sphericity produced a significant Chi-Square (χ^2) of 2884.72 ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy was 0.921 above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of service quality of healthcare services in Kenya (Leech *et al.*, 2013).

Table 4.17: Factor Analysis for Expected Service Quality

	Loadings	KMO	%CV	AVE	CR
Service Quality (Bartlett's Test Of Sphericity=2884.72**, Eigen Values=10.33)					
SQ1	0.634	0.921	64.43	0.506	0.847
SQ2	0.725				
SQ3	0.718				
SQ4	0.685				
SQ5	0.633				
SQ6	0.646				
SQ7	0.687				
SQ8	0.638				
SQ9	0.644				
SQ10	0.697				
SQ11	0.599				
SQ12	0.695				
SQ13	0.539				
SQ14	0.556				
SQ15	0.675				
SQ16	0.698				
SQ17	0.617				
SQ18	0.506				
SQ19	0.592				
SQ20	0.525				
SQ21	0.746				

Source: Research Data, (2017)

4.10.2.2 Perceived Service Quality

The factor analysis results for Innovative work behaviour are presented in Table 4.18. The principal component analysis with Varimax rotation was performed to identify the underlying factors of service quality of healthcare services. The results depicted that the high factor loading scores showed that all the items explained service quality of healthcare services as all items used to measure service quality of healthcare services were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). According to Floyd and Widman (1995) Items with loading greater than .40 are considered to be substantial and important. Similarly, Hair *et al.* (1998) suggest factor loading with score .50 and greater as very significant. Following the above criterion factor analysis with help of Principal component analysis PCA is carried on and following factors extracted

for further confirmatory Factor analysis (CFA) assessment. The EFA extracted 1 factor with an Eigen value of 11.232 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 65.23%. Thus the items was appropriate to explain the variable.

Moreover, from the Table 4.18 below, Bartlett's Test of Sphericity produced a significant Chi-Square (χ^2) of 3491.381 ($p < .05$) and Kaiser – Meyer - Olkin measure of sampling adequacy was 0.932 above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of service quality of healthcare services in Kenya (Leech *et al.*, 2013).

Table 4.18: Factor Analysis for Perceived Service Quality

	Loadings	KMO	%CV	AVE	CR
Service Quality (Bartlett's Test of Sphericity=3491.381**, Eigen Values=11.232)					
SQ1	0.736	0.932	65.23	0.52	0.86
SQ2	0.817				
SQ3	0.706				
SQ4	0.696				
SQ5	0.631				
SQ6	0.585				
SQ7	0.662				
SQ8	0.604				
SQ9	0.776				
SQ10	0.707				
SQ11	0.761				
SQ12	0.671				
SQ13	0.575				
SQ14	0.73				
SQ15	0.744				
SQ16	0.667				
SQ17	0.662				
SQ18	0.718				
SQ19	0.731				
SQ20	0.677				
SQ21	0.757				
SQ22	0.674				

Source: Research Data, (2017)

4.11 Data Transformation

The study adopted an ‘average score approach’ to calculate respondents’ total score (Osborne, 2013). This approach aggregates and calculates only those items answered by the respondents (e.g., if five items are used to measure a scale and one item is missing, the syntax calculates the average of the four items answered). Therefore, it provides an accurate total score for each construct by eliminating the missing responses. The syntax used was “MEAN#.X (a,b,c...)” where X is the minimum number of items with a valid score. In order to use this method, a majority of items must be answered (Osborne, 2013). Table 4.19 shows the results on data transformation. From the findings, service quality had the highest mean (3.95) followed by networking financing (3.57), followed by equity financing (3.22) followed by debt financing (2.97), Hospital bed capacity had mean of (2.33) while facility level had the lowest (1.35). The standard deviations for the variables were less than 1 except Hospital bed capacity indicating less variation in the responses. Finally, all independent variables and the dependent variables were normally distributed as shown in Table 4.19 below.

Table 4.19: Data Transformation

n=216	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
Service Quality	1.46	4.88	3.73	0.63	-1.98	5.23
Equity Financing	1.31	4.45	3.22	0.59	-1.38	2.87
Debt Financing	1.00	4.33	2.97	0.78	-0.61	-0.08
Network Financing	1.00	4.93	3.57	0.68	-1.67	3.39
Hospital bed capacity	1.00	5.00	2.33	1.17	0.49	-0.82
Facility level	1.00	3.00	1.35	0.59	1.50	1.21

Source: Research Data, (2017)

4.12 Regression Assumptions

According to Yu, (2010) the tests of assumptions aid the examiner to authenticate the nature of the data and identify the applicable model for the study that ensures unbiased, consistent and efficient estimates. Accordingly, if the regression assumptions are

violated, it will produce biased estimates of the links between variables, unreliable confidence intervals as well as significance tests (Chatterjee & Hadi, 2012; Cohen *et al.*, 2003). Therefore, statistical assumptions were tested to establish if the data met the normality, heteroscedasticity, linearity, multicollinearity and autocorrelation assumptions. It was on the basis of these results, that the tests of associations and prediction were performed.

4.12.1 Normality

According to Razali & Wah, (2011) Normality tests are done to check whether the data collected, organized and summarized is normally distributed. If the assumption is violated there is a possibility that the residuals in the model will give misleading T-tests, F-tests and Chi-square tests results. Subsequently, if the study variables are not found to be normally distributed, they can be transformed. For the purposes of this study, normality tests were performed by utilizing the commonly used methods namely the Kolmogorov-Smirnov and Shapiro-Wilk tests (Ghasemi & Zahediasi, 2012).

Moreover, if the tests of normality are significant, it suggests that the data is not normally distributed. Thus, for data to be considered normal, the K-S and S-W tests should not be significant (Tabachnick & Fidel, 2013). Evidently, the results presented in Table 4.20 below, confirmed that normality of the data was not a problem because tests of K-S and S-W of all the variables were not significant. Hence, the data distribution in the study was reliable for multivariate analysis.

Table 4.20: Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	0.036	216	.200*	0.994	216	0.611
Standardized Residual	0.036	216	.200*	0.994	216	0.611
Studentized Residual	0.036	216	.200*	0.994	216	0.611

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Source: Research Data, (2017)

4.12.2 Test for Heteroskedasticity

4.12.2.1 Lavene Test

Heteroscedasticity was measured by Levene's test. This test examines whether or not the variance between independent and dependent variables is equal. If the Levene's Test for Equality of Variances is statistically significant $\alpha=.05$ this indicates that the group variances are unequal. It is a check as to whether the spread of the scores in the variables are approximately the same. The findings in Table 4.21 revealed that basing on Levene statistic, homoscedasticity is not a problem for all the variables, p-value $> .05$. This essentially means that there is a linear relationship and there is no need to have a non-linear data transformation or quadratic term to fix.

Table 4.21: Lavene Test

	Levene Statistic	df1	df2	Sig.
Service Quality	1.312	4	211	0.267
Equity Financing	1.53	4	211	0.195
Debt Financing	1.904	4	211	0.111
Network Finance	0.708	4	211	0.587
Hospital characteristics	1.342	4	211	0.255

Source: Research Data, (2017)

4.12.2.2 Test for Homoskedasticity and Heteroskedasticity

To conduct the heteroskedasticity test, this study uses Breusch-Pagan and Koenker test. The findings indicated that $\text{Chi}^2(1)$ was 6.60 which was less than p value of 0.16 and Koenker test indicated that $\text{Chi}^2(1)$ was 6.22 which was less than p value of 0.18 revealing that null hypothesis was not rejected suggesting that assumption of constant variance was not violated. Findings are presented in table 4.22.

Table 4.22: Breusch-Pagan and Koenker test

----- ANOVA TABLE -----					
	SS	Df	MS	F	Sig
Model	13.19	4.00	3.30	1.56	0.00
Residual	444.91	211.00	2.11	-999.00	999.00
----- Breusch-Pagan and Koenker test statistics and sig-values -----					
	LM	Sig			
BP	6.60	0.16			
Koenker	6.22	0.18			

Null hypothesis: heteroskedasticity not present (homoskedasticity).

If sig-value less than 0.05, reject the null hypothesis.

Source: Research Data, (2017)

4.12.3 Linearity

Generally, the assumption of linearity defines the response variable as a function of the predictor variables, thus, multiple regression can estimate the relationship between the dependent and independent variables when they are linearly related (Osborne & Waters, 2002). Normally, tests of linearity are done using scatter plots and analysis of Variance (ANOVA). When ANOVA is employed in testing the assumption of linearity, the rule of thumb is that if the ρ – value is less than 0.05, then the relationship between independent and dependent variables is said to be linear and deviation from linearity have a ρ – value greater than 0.05 (Hair *et al.*, 2010; Garson, 2012). Evidently, all the relationships as shown in Table 4.24 indicated that they are linear, thus, can be

considered reliable for regression analysis in the study. The results for each of the relationship are explained in this section as follows.

The results of tests of linearity in the table 4.23 below depicts that there is a linear relationship between service quality healthcare and equity financing ($F = 409.028, p = .000$). There is also a linear relationship between service quality and debt financing ($F = 31.851, p = .000$). Furthermore, results indicate that there is a linear relationship between service quality and network financing ($F = 199.264, p = .000$). Finally, results indicate that there is a linear relationship between service quality and Hospitals characteristics ($F = 11.723, p = .001$).

Table 4.23: Linearity

		ANOVA Table			
		F	Sig.	R Squared	Eta Squared
Service Quality * Equity Financing	Linearity	409.028	0.000	0.383	0.954
	Deviation from Linearity	3.691	0.533		
Service Quality * Debt Financing	Linearity	31.851	0.000	0.065	0.618
	Deviation from Linearity	10.044	0.000		
Service Quality * Network Finance	Linearity	199.264	0.000	0.330	0.712
	Deviation from Linearity	5.772	0.000		
Service Quality * Hospital Characteristics	Linearity	11.723	0.001	0.053	0.054
	Deviation from Linearity	0.043	0.999		

Source: Research Data, (2017)

4.12.4 Multicollinearity

Multiple linear regression assumes that there is no multicollinearity in the data. Multicollinearity occurs when the independent variables are too highly correlated

with each other. Multicollinearity may be checked multiple ways: Correlation matrix- when computing a matrix of Pearson's bivariate correlations among all independent variables, the magnitude of the correlation coefficients should be less than 0.80 in order to have no multicollinearity; Variance Inflation Factor (VIF) - the VIFs of the linear regression indicate the degree that the variances in the regression estimates are increased due to multicollinearity. VIF values higher than 10 indicate that multicollinearity is a problem. In addition, tolerance values of less than .1 indicate the presence of multicollinearity. The findings in Table 4.24 revealed that the VIF values for all the independent variables were below 10. This means that for all the independent variables, there was no presence of multicollinearity.

Table 4.24: Multicollinearity

Name of Variables	Collinearity Statistics	
	Tolerance	VIF
Equity Financing	0.434	2.303
Debt Financing	0.976	1.024
Network Finance	0.444	2.252
Hospital Characteristics	0.946	1.058

Source: Research Data, (2017)

4.12.5 Autocorrelation/Independent of Errors

Autocorrelation represents the degree of similarity between a given time series and a lagged version of itself over successive time intervals. Autocorrelation measures the relationship between a variable's current value and its past values. The Durbin Watson (DW) statistic is used test for autocorrelation in the residuals from a statistical regression analysis. The Durbin-Watson statistic will always have a value between 0 and 4. A value of 2.0 means that there is no autocorrelation detected in the sample. Values from 0 to less than 2 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation (Field, 2009) Therefore, from table 4.25 indicated a positive autocorrelation. Thus the results indicated a significant

autocorrelated relationship between all the independent variables and service quality. This implied non-violation of the autocorrelation assumption.

Table 4.25: Autocorrelation/Independent of Errors

Name of Variables	Durbin-Watson
Control Variables	2.007
Predictor Variable	2.040
Moderator Variable	2.084

Source: Research Data, (2017)

4.13 Correlation Analysis

In order to measure relationships between moderated mediation of Bed Capacity and Facility Type on the relationship between Financial Strategies and Service Quality, Bartlett's Test of Sphericity for financing strategies and service quality, a Pearson correlation coefficient was calculated. Pearson correlation is a measure of the correlation (linear dependence) between two variables X and Y, giving a value between +1 and -1 inclusive (Nunnally, 1978). The Pearson's correlation coefficient assesses the degree to which quantitative constructs are linearly related in a sample (Nikolić et al. 2012). The larger the absolute value of the correlation coefficient, the stronger the relationship. Pearson correlation test was used. In this test the null hypothesis is a zero correlation coefficient (no relation). If the level of significance test is less than 0.05, null hypothesis will be rejected. In the ensuing discussion, the resultant correlations were indicated by the prefix 'r' – where the degree of correlation was expressed by a value of the coefficient (Katz 2006).

From the results in table 4.26, there is a positive and significant correlation between the independent variables and service quality. Particularly, the correlation results showed that equity financing has a positive and significant relationship with service quality ($r = 0.619, p < 0.01$). Debt financing negatively correlate with service quality ($r = -0.255,$

$\rho < 0.01$). Moreover, results indicate that a network financing positively relates to service quality ($r = 0.574$, $\rho < 0.01$).

Further, results indicate that Hospital characteristics positively relates to service quality ($r = 0.230$, $\rho < 0.01$). Firm age ($r = 0.0$, $\rho > .01$) and facility level ($r = 0.003$; $\rho > .05$) showed no significant relationship with service quality. Based on the above results there is an indication of the linear relationship between all predictors on service quality within the health sector, hence there need to perform a more sophisticated model such as multiple regression model to show a cause-effect relationship.

Table 4.26: Correlation Analysis

	1	2	3	4	5	6	7
1	1						
2	.619**	1					
3	-.255**	0.122	1				
4	.574**	.745**	0.13	1			
5	.230**	.222**	0.097	.157*	1		
6	0.012	-0.067	-.159*	-0.108	.222**	1	
7	0.026	-0.078	0.066	-0.008	.146*	.150*	1

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

* Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data, (2017)

- 1 = Service Quality
- 2 = Equity Financing
- 3 = Debt Financing
- 4 = Network Finance
- 5 = Hospital Characteristics
- 6 = Firm age
- 7 = Facility level

4.14 Regression Model

The regression analysis was performed to test the model fit and to establish the predictive power of the models in the response variable. Although there is quite a number of methods of regression such as forced entry, hierarchical method and stepwise methods (Field, 2009), the present study used the multiple regression and Hayes model 1 to test direct and moderation effects (hypotheses 1– 4) and Hayes model 1 to test for mediation effect. Since it indicates precisely what happens to the regression model as different predictor variables are introduced. Thus, the researcher was able to systematically acknowledge the contribution of each independent variable in explaining the predictive power of the model. This section presents the results for the main effects and eventually the interaction effects of the variables in the study.

4.14.1 Control Variable and Service Quality

A multiple linear regression analysis was performed to calculate the coefficients of control variables with service quality. The combined prediction of all the variables accounted for approximately 0.00% of the total variation in quality ($R^2 = .00$). The ANOVA model showed that the prediction of the control variables as depicted in Table 4.27 was not statistically significant ($F = 0.32, p = .73$). Thus, the model was not fit to predict service quality using control variables.

Table 4.27: Control Effect

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	3.60	0.17		21.25	0.00
Firm age	0.03	0.04	0.05	0.71	0.48
Facility level	0.02	0.07	0.02	0.31	0.76
Model Summary					
R	0.06				
R Square	0.00				
Adjusted R Square	-0.01				
Std. Error of the Estimate	0.63				
Model Fitness					
F	0.32				
Sig.	0.73				

a Dependent Variable: Service Quality

Source: Research Data, (2017)

4.15 Hypotheses Testing

4.15.1 Gap Analysis (Hypothesis 1)

Paired Sample Test was used to test the first Hypothesis which stated that *there is no service quality gap on quality expectations and quality perceptions in healthcare provision by hospitals in Kenya*. The results in table 4.28 an insignificant gap between the perception and expectation for all the dimensions of service quality ($p > .05$) except for tangibility. Further there was insignificant gap between the perception and expectation for average service quality. Thus the hypothesis is thereby supported.

Table 4.28: Gap Analysis (Hypothesis 1)

	Mean			Paired Samples Test	
	Perceived	Expected	Gap	t	Sig. (2-tailed)
Tangibility	3.580	3.833	-0.253	-3.702	0.000
Reliability	3.719	3.875	-0.156	-2.163	0.032
Responsiveness	3.914	3.863	0.052	0.764	0.446
Assurance	3.953	3.950	0.003	0.039	0.969
Empathy	3.909	3.878	0.031	0.469	0.639
Service quality	3.815	3.880	-0.065	-1.108	0.269

Source: Research Data, (2017)

4.15.2 Hypothesis Testing (Direct Effect, Hypothesis 2, 3, 4)

A multiple linear regression analysis was performed to calculate the coefficients of independent variables with service quality. The combined prediction of all the variables accounted for approximately 53% of the total variation in service quality ($R^2 = .53$). The ANOVA model showed that the prediction of the independent variable as depicted in Table 4.29 was statistically significant ($F = 79.739, p = .000$). Thus, the model was fit to predict service quality using financing strategies.

Hypothesis 2(H₀₂) Predicted that Equity financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya. However, the results presented in Table 4.29 showed a positive and significant association between equity financing strategies and service quality as indicated by all the positive $\beta = .48$ and significance value of less than .05 ($p < .05$). Therefore, based on these results, the hypothesis was rejected.

Hypothesis 3(H₀₃) Debt financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya. Findings showed that debt financing had coefficients of estimate which was significant basing on $\beta_3 = -0.28$ (p-value = 0.00 which is less than $\alpha = 0.05$ hence it was concluded that debt financing had a negative and significant effect on service quality. Therefore, based on these results, the hypothesis was rejected.

Hypothesis 4(H₀₄) Network financing strategies do not significantly affect the quality of health care services provided by hospitals in Kenya. However, the results presented in Table 4.29 showed a positive and significant association between equity financing strategies and service quality as indicated by all the positive $\beta = .26$ and significance

value of less than .05 ($\rho < .05$). Therefore, based on these results, the hypothesis was rejected.

Table 4.14: Hypothesis Testing (Direct effect, Hypothesis 2, 3, 4)

	Unstandardized		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.07	0.20		10.62	0.00
Equity Financing	0.48	0.08	0.45	6.37	0.00
Debt Financing	-0.28	0.04	-0.35	-7.30	0.00
Network Finance	0.26	0.07	0.29	4.03	0.00
Model Summary					
R	0.73				
R Square	0.53				
Adjusted R Square	0.52				
Std. Error of the Estimate	0.43				
Model Fitness					
F	79.739				
Sig.	.000				

a Dependent Variable: Service Quality

Source: Research Data, (2017)

4.15.3 Testing Moderating Effect of Bed Capacity on the Relationship between Financing Strategies and Service Quality

H_{05a}: There is no Moderating effect of hospital bed capacity on relationship between equity financing and service quality

The result presented by table 4.30, shows that 9.1% was explained by the moderation effect of hospital bed capacity between equity financing and service quality (R-sq. change =.091). From findings showed that moderation of hospital bed capacity has a significant effect on relationship between equity financing and service quality ($\beta = 0.348$, $p = 0.00$). The moderation effect was also confirmed by bootstrapping upper and lower level of confidence with no zero in between (BootLLCI= 0.201, BootULCI= 0.496).

Table 4.15: Moderating Effect of Bed Capacity on Relationship between Equity Financing and Service Quality

Model : 1 Y : ZService X : ZEquityF W : ZBedcapa

**

OUTCOME VARIABLE: ZService

Model Summary

R	R-sq	MSE	F	df1	df2	p
0.329	0.108	0.905	8.553	3	212	0.000

Model

	Coeff	Se	t	P	LLCI	ULCI
Constant	0.000	0.066	0.000	1.000	-0.130	0.130
ZEquityF	0.030	0.069	0.435	0.664	-0.105	0.165
ZBedcapa	0.061	0.067	0.904	0.367	-0.072	0.192
Int_1	0.348	0.075	4.645	0.000	0.201	0.496

Product terms key:

Int_1 : ZEquityF x ZBedcapa

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	0.091	21.5781	1	212	0.000

Conditional effects of the focal predictor at values of the moderator(s):

ZBedcapa	Effect	Se	t	P	LLCI	ULCI
-1.141	-0.368	0.095	-3.882	0.000	-0.554	-0.181
-0.282	-0.069	0.066	-1.034	0.302	-0.199	0.062
1.435	0.530	0.142	3.736	0.000	0.250	0.809

***** ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output: 95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Source: Research Data, (2017)

H_{05b}: There is no Moderating effect of hospital bed capacity on relationship between debt financing and service quality.

The result presented by table 4.31, shows that 6.3% was explained by the moderation effect of hospital bed capacity between debt financing and service quality (R-sq. change=.063). From findings showed that moderation of hospital bed capacity has effect on relationship between equity financing and service quality ($\beta = 0.255$, $p = 0.00$). The moderation effect was also confirmed by bootstrapping upper and lower level of confidence with no zero in between (BootLLCI= 0.129, BootULCI= 0.380).

Table 4.16: Moderating Effect of Bed Capacity on Relationship between Debt Financing and Service Quality

Model : 1 Y : ZService X : ZDebtFin W : ZBedcapa

**

OUTCOME VARIABLE: ZService

Model Summary

	R	R-sq.	MSE	F	df1	df2	p
Model	0.409	0.168	0.844	14.225	3	212	0.000

	Coeff	Se	t	p	LLCI	ULCI
constant	0.011	0.063	0.176	0.861	-0.112	0.134
ZDebtFin	-0.224	0.057	-3.955	0.000	-0.335	-0.112
ZBedcapa	0.128	0.064	2.019	0.045	0.003	0.253
Int_1	0.255	0.064	4.008	0.000	0.129	0.380

Product terms key:

Int_1 : ZDebtFin x ZBedcapa

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	P
X*W	0.063	16.060	1	212	0.000

Conditional effects of the focal predictor at values of the moderator(s):

ZBedcapa	Effect	Se	T	p	LLCI	ULCI
-1.141	-0.514	0.083	-6.181	0.000	-0.678	-0.350
-0.282	-0.295	0.056	-5.273	0.000	-0.406	-0.185
1.435	0.142	0.116	1.222	0.223	-0.087	0.370

Level of confidence for all confidence intervals in output: 95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Source: Research Data, (2017)

H_{05c}: There is no Moderating effect of hospital bed capacity on relationship between network financing and service quality.

The result presented by table 4.32, shows that 7.22% was explained by the moderation effect of hospital bed capacity between network financing and service quality (R-sq. change =.072). From findings showed that moderation of hospital bed capacity has effect on relationship between network financing and service quality ($\beta = 0.076$, $p = 0.00$). The moderation effect was also confirmed by bootstrapping upper and lower level of confidence with no zero in between (BootLLCI= 0.162, BootULCI= 0.463).

Table 4.17: Moderating Effect of Bed Capacity on Relationship between Network Financing and Service Quality

Model: 1 Y : ZService X : ZNetwork W : ZBedcapa

**

OUTCOME VARIABLE: ZService

Model Summary

	R	R-sq.	MSE	F	df1	df2	p
Model	0.300	0.090	0.923	6.996	3	212	0.000
	Coeff	Se	T	P	LLCI	ULCI	
constant	-.0014	0.067	-0.021	0.983	-0.133	0.130	
ZNetwork	-.0013	0.069	-0.019	0.985	-0.137	0.134	
ZBedcapa	.0671	0.068	0.992	0.322	-0.066	0.200	
Int_1	.3126	0.076	4.102	0.000	0.162	0.463	
Test(s) of highest order unconditional interaction(s):							
		R2-chng	F	df1	df2	P	
X*W		0.0722	16.8232	1	212	0.0001	

Conditional effects of the focal predictor at values of the moderator(s):							
ZBedcapa	Effect	Se	T	P	LLCI	ULCI	
-1.1408	-0.3579	0.099	-3.6133	0.0004	-0.5531	-0.1626	
-0.2822	-0.0895	0.0677	-1.3219	0.1876	-0.223	0.044	
1.4349	0.4473	0.1408	3.1769	0.0017	0.1697	0.7248	

Level of confidence for all confidence intervals in output: 95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Source: Research Data, (2017)

4.15.4 Testing Moderating Effect of Facility Type on the Relationship between financing Strategies and Service Quality

H_{06a}: There is no Moderating effect of facility type on relationship between equity financing and service quality

The result presented by table 4.33, shows that 12% was explained by the moderation effect of facility type between equity financing and service quality (R-sq. change =.11). However, the findings showed that moderator occurs at second category relationship moderation of facility type (Private-Public) has a significant effect on relationship

between equity financing and service quality ($\beta = 0.82, p = 0.00$). The moderation effect was also confirmed by bootstrapping upper and lower level of confidence with no zero in between (BootLLCI=0.27, BootULCI=0.81). This concludes that in public private hospitals effect of equity financing on service quality was higher than public and faith-based hospitals.

Table 4.18: Moderating Effect of Facility Type on Relationship between Equity Financing and Service Quality

Model: 1, Y : ZService, X : ZEquityF, W : ZFacilit

Sample Size: 216
Coding of categorical W variable for analysis:

ZFacilit	W1	W2
-.740	.000	.000
.592	1.000	.000
1.923	.000	1.000

OUTCOME VARIABLE: ZService

Model Summary

R	R-sq.	MSE	F	df1	df2	p
0.35	0.12	0.90	5.76	5	210	0.0001

Model

	coeff	se	t	p	LLCI	ULCI
constant	-0.04	0.08	-0.52	0.60	-0.21	0.12
ZEquityF	-0.28	0.09	-3.09	0.00	-0.45	-0.10
W1	-0.04	0.16	-0.23	0.82	-0.36	0.28
W2	0.19	0.19	1.02	0.31	-0.18	0.57
ZEquityF xW1	0.82	0.16	5.02	0.00	0.50	1.14
ZEquityF x W2	0.07	0.17	0.40	0.69	-0.27	0.41

Test(s) of highest order unconditional interaction(s):

R2-chng	F	df1	df2	p	
X*W	.11	13.17	2	210	0.000

Conditional effects of the focal predictor at values of the moderator(s):

ZFacilit	Effect	se	t	p	LLCI	ULCI
-0.74	-0.28	0.09	-3.09	0.00	-0.45	-0.10
0.59	0.54	0.14	3.97	0.00	0.27	0.81
1.92	-0.21	0.15	-1.42	0.16	-0.50	0.08

***** ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output:95

Source: Research Data, (2017)

H_{06b}: There is no Moderating effect of facility type on relationship between debt financing and service quality.

The result presented by table 4.34, shows that there was insignificant moderation effect of facility type between debt financing and service quality (R-sq. =.01, p>.05). From findings showed that moderation of three categories of Facility Type (public, private and faith-based hospitals) *have* insignificant effect on relationship between debt financing and service quality ($\beta = -0.22$, $p = 0.16$, $\beta = -0.07$, $p = 0.66$).

Table 4.19: Moderating Effect of Facility Type on Relationship between Debt Financing and Service Quality

Model : 1, Y : ZService, X : ZDebtFin, W : ZFacilit							
Sample Size: 216							
OUTCOME VARIABLE: ZService							
Model Summary							
	R	R-sq.	MSE	F	df1	df2	p
Model	0.3669	0.13	0.89	6.53	5	210	0.00
	coeff	se	t	p	LLCI	ULCI	
constant	-0.13	0.08	-1.52	0.13	-0.29	0.04	
ZDebtFin	-0.29	0.08	-3.75	0.00	-0.44	-0.14	
W1	0.56	0.18	3.17	0.00	0.21	0.92	
W2	0.21	0.18	1.14	0.26	-0.15	0.57	
ZDebtFin x W1	-0.22	0.16	-1.41	0.16	-0.52	0.09	
ZDebtFin x W2	0.07	0.16	0.44	0.66	-0.24	0.37	
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	0.01	1.33	2	210	0.27		

Level of confidence for all confidence intervals in output: 95

Source: Research Data, (2017)

H_{06c}: There is no Moderating effect of facility type on relationship between network financing and service quality.

The result presented by table 4.35, shows that facility type does not moderate relationship between network financing and service quality (R-sq. =.01, p>.05). From findings showed that that moderation of three categories of Facility Type (public,

private and faith-based hospitals) *have* insignificant effect on relationship between working facility and service quality ($\beta = -0.03$, $p = 0.86$, $\beta = -0.27$, $p = 0.13$).

Table 4.20: Moderating Effect of Facility Type on Relationship between Network Financing and Service Quality

Model : 1, Y : ZService, X : ZNetwork, W : ZFacilit

Sample Size: 216

OUTCOME VARIABLE: ZService

Model Summary

	R	R-sq.	MSE	F	df1	df2	p
Model	0.15	0.02	1.00	0.97	5	210	0.44
	coeff	Se	t	p	LLCI	ULCI	
Constant	-0.06	0.09	-0.69	0.49	-0.24	0.11	
ZNetwork	-0.02	0.09	-0.17	0.87	-0.20	0.17	
W1	0.16	0.17	0.97	0.33	-0.17	0.50	
W2	0.23	0.20	1.14	0.26	-0.17	0.62	
ZNetwork xW1	0.03	0.18	0.17	0.86	-0.33	0.39	
ZNetwork xW2	-0.27	0.18	-1.53	0.13	-0.63	0.08	
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	0.01	1.33	2	210	0.27		

Level of confidence for all confidence intervals in output:95

Source: Research Data, (2017)

4.15.5 Modgraphs

The Mod graphs presented in Figures 4.1, 4.2, 4.3 and 4.4 respectively fulfilled the condition that for interaction effects to be significant, the graphs should not be parallel but have different slopes or gradient (Jose, 2008). The graphs were used to test whether facility type moderates the effect of predictor variables on service quality. The interaction effect of facility type and all the predictor variables (debt financing, equity financing and network financing) on service quality were assessed at low and high levels. However, the relationship between the financing strategies and service quality was not moderated by facility type, hence not presented graphically. Therefore, the results in Table 4.30 were also confirmed by plotting them in a Modgraph.

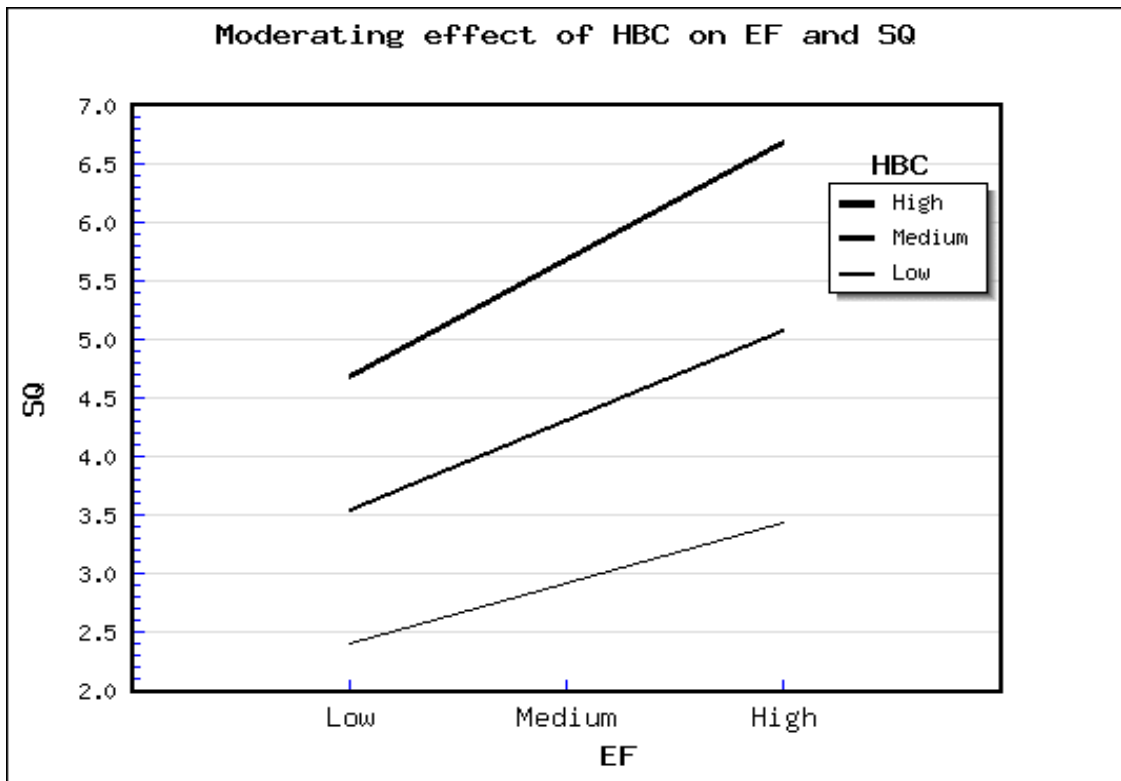


Figure 4.3: Moderating Effect of HBC on EF and SQ

Source: Research Data, (2017)

For descriptive purposes, this study plotted predicted equity financing against service quality, separately for low and high levels of Hospital bed capacity (Fig. 4.1). Simple slope tests indicated that for low Hospital bed capacity, higher levels of equity financing were associated with higher-level of service quality.

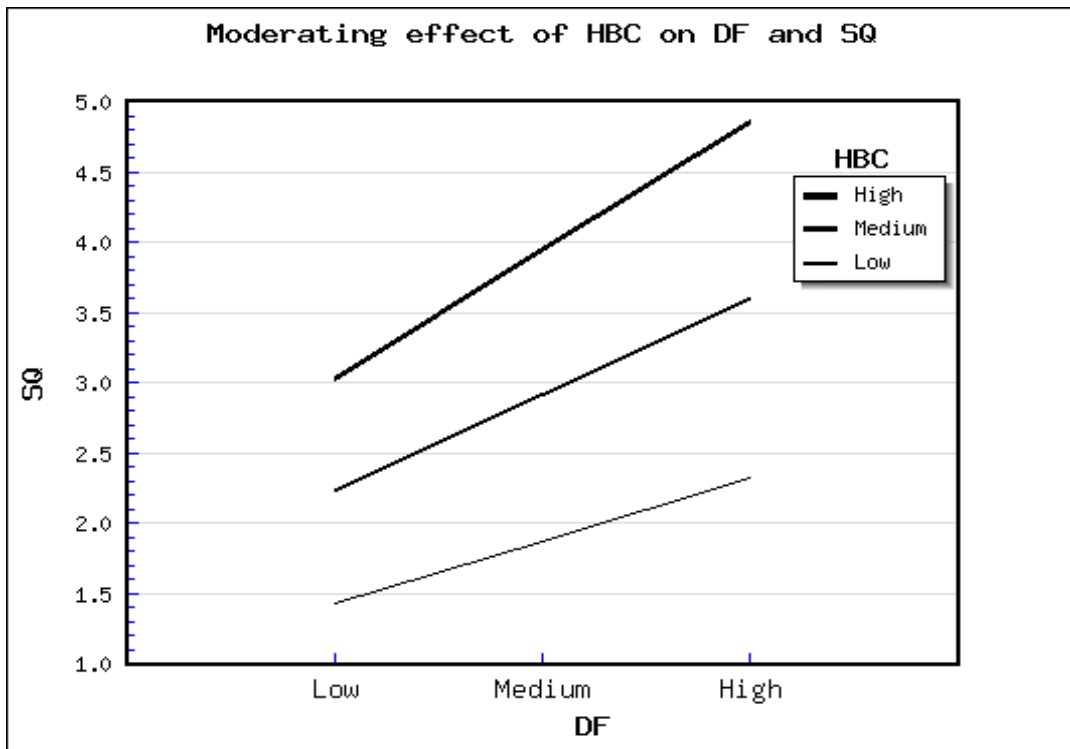


Figure 4.4: Moderating Effect of HBC on DF and SQ

Source: Research Data, (2017)

According to figure 4.2, due to descriptive purposes the study plotted predicted debt financing against service quality, separately for low and high levels of Hospital bed capacity. Simple slope tests indicated that for low Hospital bed capacity, higher levels of debt financing were associated with higher-level of service quality.

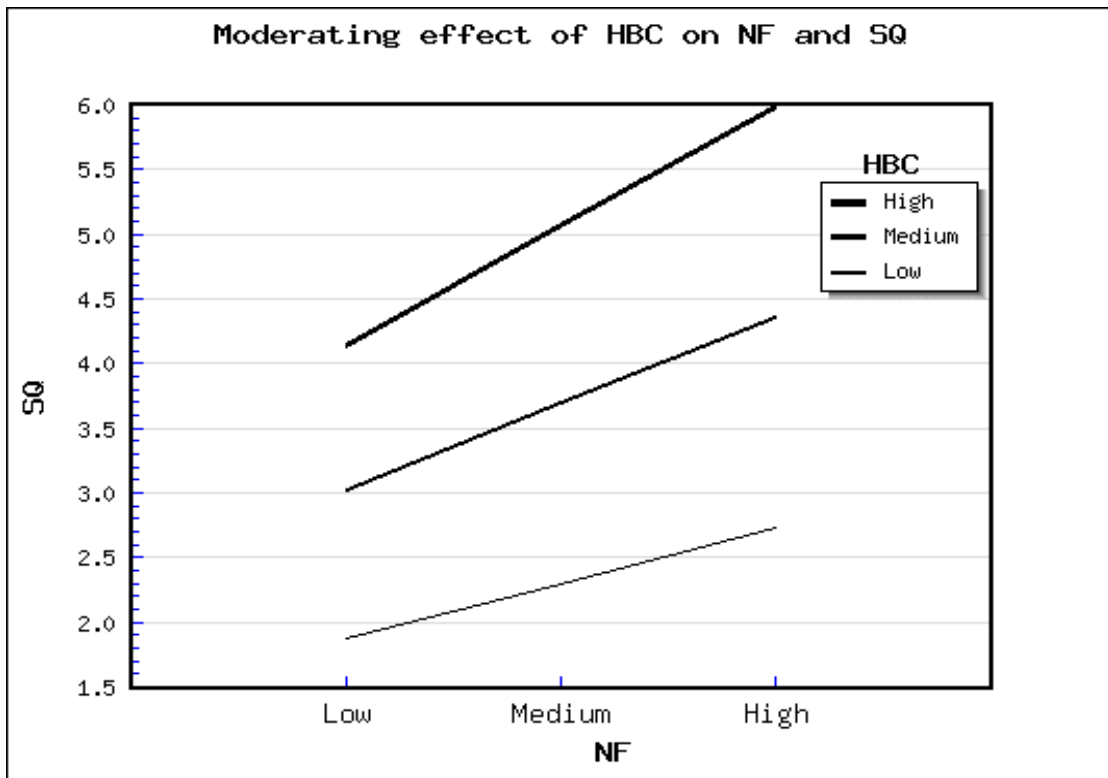


Figure 4.5: Moderating Effect of HBC on NF and SQ

Source: Research Data, (2017)

Figure 4.3 shows plotted results that were obtained for descriptive purposes, the results predicted that network financing against service quality, separately for low and high levels of Hospital bed capacity. Simple slope tests indicated that for low Hospital bed capacity, higher levels of network financing were associated with higher-level of service quality.

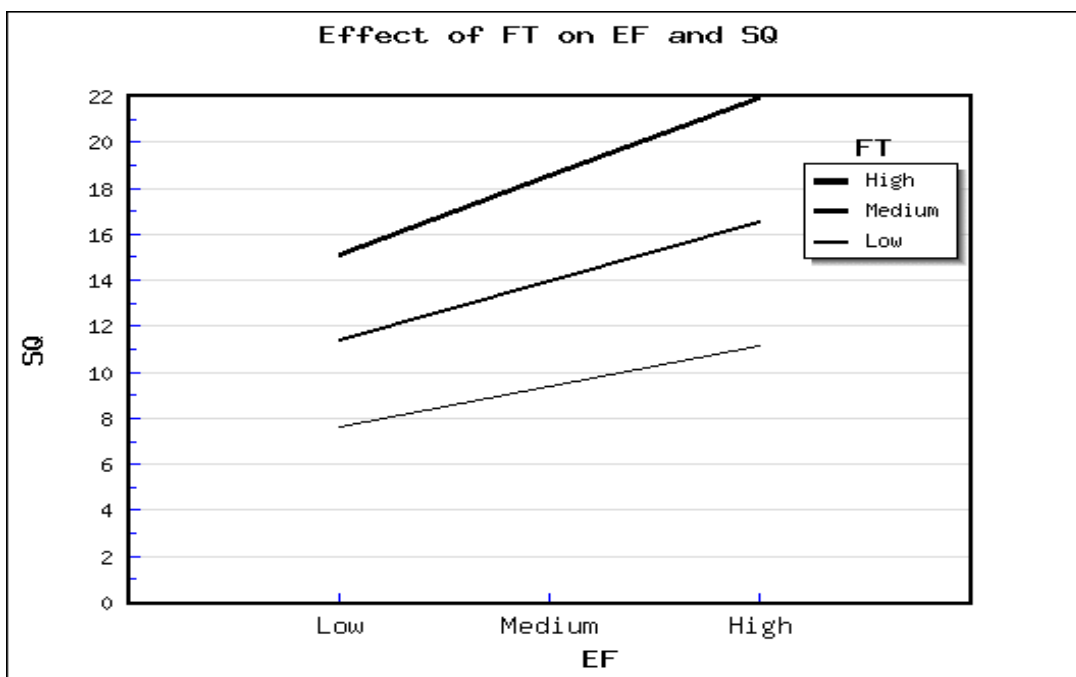


Figure 4.6: Moderating Effect of FT on EF and SQ

Source: Research Data, (2017)

According to figure 4.4, the study plotted results predicted equity financing against service quality, separately for low and high levels of facility type. Simple slope tests indicated that for low facility type, higher levels of equity financing were associated with higher-level of service quality.

4.16 Summary of Hypotheses Testing Results

The results presented in Table below 4.36 indicated the summary of both multiple and hierarchical regression models. Thus, the table shows (R^2) and Δ in (R^2) for both main and interaction effects as well as the decision on the formulated hypothesis.

Table 4.21: Summary of Hypotheses Testing Results

Hypothesis Formulated	Beta (β)	ρ – values	Decision
H₀₁: There is no service quality gap on quality expectations and quality perceptions in healthcare provision by hospitals in Kenya.	-0.065	.265	Fail to Reject
Main Effects		R² (.53)	
H₀₂: Equity financing has no significant effect on service quality.	.45	.000	Rejected
H₀₃: Debt financing has no significant effect on service quality.	-.35	.000	Rejected
H₀₄: Networking financing has no significant effect on service quality.	.29	.000	Rejected
Hayes Model 1a – Bed Capacity		Beta (β)	R²Δ
H_{05a}: Bed capacity does not moderate the relationship between equity financing and service quality	.348	.091	Rejected
H_{05b}: Bed capacity does not moderate the relationship between debt financing and service quality	.225	.063	Rejected
H_{05c}: Bed capacity does not moderate the relationship between network financing and service quality	.313	.072	Rejected
Hayes Model 1a – Facility Type		Beta (β)	R²Δ
H_{06a}: Facility type does not moderate the relationship between equity financing and service quality	.35	.110	Rejected
H_{06b}: Facility type does not moderate the relationship between board chairman self-efficacy and service quality	.37	-	Fail to Reject
H_{06c}: Facility type does not moderate the relationship between board member's expertise and service quality	.15	.01	Fail to Reject

Source: Research Data, (2017)

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter focused on presenting the summary and the discussions of the findings. Draw conclusions in line with the objectives of the study findings in chapter four, formulate recommendations on appropriate interventions that should be considered, state contributions to new knowledge as well as make recommendations for further research.

5.1 Summary and Discussions of the Findings

The purpose of the study was to establish whether there is a gap between the expected and the perceived healthcare service quality, the effect of financing strategies on delivery of quality healthcare services and the moderating effect of Hospital characteristics in the provision of service quality healthcare.

The objectives of the study were to; (i) Determine the gap between quality expectations and quality perception of healthcare services (ii) To establish the effect of equity financing strategies on quality of healthcare services (ii) To find out the effect of debt financing strategies on quality of healthcare services (iv) To analyse the effect of networks financing strategies on quality of healthcare services (v) To establish the moderating effect of hospital bed capacity on the relationship between financing strategies and quality of healthcare (vi) To determine the moderating effect of Facility Type on the relationship between financing strategies and quality of healthcare. The study targeted Public, Private and Faith-Based hospitals in Level 4 to Level 6 category in Kenya. An explanatory design was adopted for the study and a questionnaire was

used to collect the data. Necessary steps were taken to preserve the respondents including seeking consent to carry out the study.

The following is the summary of the findings of this study. The key highlights of this chapter are that financing strategies and hospital characteristics significantly affect service quality healthcare services in hospitals in Kenya.

The study findings have been summarized under the following sub-sections in accordance to the objectives of the study;

5.1.1 The Gap between Quality Expectations and Quality Perception

A paired sample t-test was carried out to determine the gap between the expected and the perceived service quality for all the dimensions of service quality. The P value was more ($p > .05$) except for tangibility. These results showed that there was no significant gap between the perception and expectation for average service quality. Therefore the first hypothesis stating that *there is no service quality gap on quality expectations and quality perceptions in healthcare provision by hospitals in Kenya*, was supported as being true. The implication of these results was that the service quality offered by the hospitals was more or less the same as that expected by the patients.

5.1.2 Effect of Equity Financing and Service Quality

The regression test results had a p-value of 0.000 ($p\text{-value} < 0.05$). Hence, the null hypothesis which stated that *equity financing has no significant effect on service quality healthcare services in hospitals in Kenya* was rejected in favour of the alternate hypothesis. Equity financing has a significant effect on service quality healthcare services in hospitals in Kenya. A 0.48 unit's increase in equity financing was found to lead to a proportionate increase in service quality healthcare services in hospitals in

Kenya. This result is possible and can be attributed to the role the equity (Exchequer and Out-of-Pocket and NHIF finances play in healthcare and especially in the public hospitals which offer services to the majority of Kenyans.

These results were backed up by Kimani *et al.*, (2013) who found that equity financing is the less burden of paying debts providing opportunities to channel more money to grow the hospital, forgotten credit issues, and opportunities to learn and gain from partners. Some of the well-known and well-researched equity financing strategies include funding through ex-chequer and cost sharing mechanisms. Ministries of health are entrusted to protect equity in access by improving financial risk protection, by reducing financial barriers to access particularly to the poor and to vulnerable populations, and by ensuring that health care financing by all income groups is fair. This is consistent with the findings of Jordan *et al.* (2005) and Fu *et al.* (2002) who reported similar findings. However this finding contrasts with the findings of Jung *et al.* (1996), Khan (1994) and Farid (1980) who report significant negative relationship between equity financing and business performance. The findings of this study is in accordance with the review of Myers and Majluf (1984) who proposed that use of equity financing to improve the performance of the business as the cost of debt financing is high. According to them again, the organization' use of high debt financing would have to incur additional premium costs and thus affects the profitability of the firm.

The results of this study on the overall effect of equity on firm performance concur with the findings of previous studies such as Khalaf (2013), Oke and Afolabi (2011) who showed that a positive relationship existed between firms' performance and equity financing; Githire and Muturi (2016) who found that equity has a positive and

significant effect on financial performance and Njeri and Kagiri (2013) who concluded that equity financing positively affected a firm's financial performance. However, some of the findings contradict those of Ronoh and Ntoiti (2015) whose studies revealed that equity financing negatively affected firm performance. These results also support La Porta et al.'s (2002) argument that shows equity concentration as being more likely to positively affect firm performance particularly in firms where control by large equity holders may act as a substitute for legal protection in countries such as Kenya where the capital markets are less developed

5.1.3 Effect of Debt Financing and Service Quality

The second objective of the study was *to find out the effect of debt financing on service quality healthcare services in hospitals in Kenya*. The regression results had a p-value of 0.000 ($p\text{-value} < 0.05$) and therefore the null hypothesis that debt financing does not affect the service quality healthcare services in hospitals in Kenya was rejected. Debt financing has a significant effect on service quality healthcare services in hospitals in Kenya. A 0.28 unit's increase in debt financing was found to lead to a proportionate decrease in service quality healthcare services in hospitals in Kenya. The findings tally with Khan and Khan (2013) findings that there is a negative relationship between total debt and ROA and ROE. In contrast, Ebaid's (2009), establishes that debt has no significant influence on profitability measured by ROA, as is the case with. Yet, Tauseef, *et al.*, (2013) examine the effect of debt financing on firm's financial performance, measured as return on equity. Empirical results show a nonlinear relationship between return on equity and total debt ratio. Although ROE initially increases as the total debt ratio increases, once an optimal debt level is reached, ROE begins to decrease.

This result differs from a comparative analysis study by Howton, *et al.*, (2014 which concluded that the use of debt in the capital structure of the hospital has a positive influence on quality of care. The evidence is consistent with the notion that public hospitals can take advantage of their borrowing capacity stemming from the benefits of tax-exempt bonds. Debt finances normally come with the obligation of repayment of the principal amount plus the interest. For an Institution to get into debt financing, it must have worked out the detailed on the benefit of the borrowing as well as the repayment arrangements. The prior empirical evidence shows that different debt financing sources may indeed be unequally valuable for a firm. However, this evidence is mixed. While some suggests that bank loans enhance firm performance (Easterwood & Kadapakkam, 1991), others argue that banks create offsetting costs (Houston & James, 1996), and public debt provides increased financial flexibility and more preferential conditions for a firm's growth rates (Weinstein & Yafeh, 1998).

5.1.4 Effect of Network Financing and Service Quality

The third objective of the study was to assess the influence of network financing on service quality healthcare services in hospitals in Kenya. The regression results had a p-value of 0.000 ($p\text{-value} < 0.05$) and therefore the null hypothesis that network financing does not affect the service quality healthcare services in hospitals in Kenya was rejected. Network financing has a significant effect on service quality healthcare services in hospitals in Kenya. A 0.26 unit's increase in network financing was found to lead to a proportionate increase in service quality healthcare services in hospitals in Kenya. The results are supported by Onwujekwe *et al.*, (2020) that Hospital Managers and administrators reported that multiple flows increased their financial pool and capacity to undertake capital projects and enabled the provision of a wider range of services to client. However, Onwujekwe *et al.*, (2020) indicated that donor funds were

perceived to be inequitable because funded activities are not implemented in all States and support is for specific services that may not benefit everyone. However, for the health services that is supported. Donors sometimes do not align with National priorities and their good intentions may disrupt, rather than strengthen the health system. Donor funding has been a major source of financing for health service delivery particularly for vulnerable groups. It has also contributed considerably to financing of technical support and capacity building activities for health workers and health professionals

5.1.5 Effect of Bed Capacity on the Relationship between Financing Strategies and Service Quality

The results on moderation effect of hospital bed capacity on the relationship between equity financing showed that hospital bed capacity has a significant effect on relationship between equity financing and service quality. This shows that hospitals with high bed capacity have high probability of enhancing the positive effect of equity financing on hospital service quality. Similarly, there was positive and significant moderation of hospital bed capacity has a significant effect on relationship between debt financing and service quality. This infers that the higher the number of beds there are in hospital the more the hospitals utilizes debts for high service quality. Further, results on moderating effect of hospital bed capacity on the relationship between networking financing and service quality showed that hospital bed capacity has a significant effect on relationship between networking financing and service quality. The findings are supported Compton, *et al.*, (2014) assertion that the level of donors and exchequer financing of hospitals depends on the number of beds that are available in the hospital the period of time that the hospitals have been in operation which improves the hospitals quality of service of the hospitals compared to hospitals with low number of beds. Similarly, Humba (2011) concede with the study findings that Bed

capacity being used as bases of hospital funding and the most the desirable metric for hospital care and service provision planning, Sheetz, et al (2016) deduce that since they are one of the existing indicators of hospital capacity that are regularly collected, bed count may hold the advantage of utility but the fundamental demerits of this index are a growing perception.

5.1.6 Effect of Hospital Type on the Relationship between Financing Strategies and Service Quality

Based on the study results from Hayes model 1 on moderation effect of hospital type on the relationship between equity financing and hospital service quality, hospital type (Private-Public) has a significant effect on relationship between equity financing and service quality). However, from findings showed that moderation of three categories of hospital type (public, private and faith-based hospitals) did not moderate the effect of debt financing and service quality and effect of network financing and service quality. This infers that the effect of equity financing on service quality was stronger in public hospitals than private hospitals. The results relate with Handel, *et.al*, (2014) opinion that financing of hospitals depends so much on type hospital toward quality service delivery. Private hospital which are in category of profit making business are associated with better service when adequate funding are available. On the contrary Tourangeau, *et al.*, (2017) argued that these service quality of public hospitals may not be affected by any financing strategies due too high number of patients that seek attendance from such hospitals. This increase pressure leading to poor service delivery since the practitioners may not have enough time to attended individual patient at a time.

5.2 Conclusion

The study concludes that service quality in all facilities in Kenya remains a challenge. Evidence of the same has been frequent industrial unrest among the healthcare givers which deprive hospitals of the much needed human resource hence affecting the quality of services. The course of which needs to be further investigated and interventions be put in place. It is also evident that hospital characteristics and specifically bed capacity and facility type impacts on the relationship between financing strategies and service quality and that the service providers and potential healthcare investors should pay attention to them.

In terms of financing, user charges through out-of-pocket (OOP) expenditure represent a major source of health care financing in low-income countries (LICs) of total healthcare expenditure (THE). In the Kenya hospitals for instance, OOP expenditure remains in general, the principal method of financing healthcare services and contributes towards at least 36% of all health expenditures. It is estimated that this leads to the impoverishment of an estimated 1 million households, while a further 39% of sick people fail to seek treatment (Gitahi, 2011).

In conclusion no country has single healthcare financing strategy. Within any country, all domestic funding for healthcare ultimately comes – whether through general tax payments, health insurance or direct out-of-pocket payments – from two main sources: companies and households (or individuals). A country may, for example, have universal mandatory health insurance funded from payroll contributions by formal sector employees, from contributions by informal sector workers in the community and for the poor, from contributions fully subsidized out of tax revenue. In addition, the country may have “top-up” voluntary health insurance and out-of-pocket payments for services

outside of the mandatory insurance benefit package. Each financing strategies has advantages and disadvantages and each can be structured differently in order to enhance its potential for achieving specific objectives and for minimizing the risk of adverse consequences.

While the pursuit of profit induces hospitals to enhance quality of services they offer, the lack of financial results in a lower standard of healthcare services, implying the importance of monitoring the quality of care among those hospitals with poor financial health. Donor funding seems to be an alternative in the short run for scaling up expenditures and service quality in health in many low-income countries, especially in Africa hence long term plans should be considered where the country can fully take care of the health of its citizens.

Financing strategies for healthcare presents an enormous challenge to low and middle-income countries. However, despite their limited economic resources, a small number of countries have greatly improved the health status of their populations. They have done so through innovative strategies for financing and providing healthcare, as well as through other interventions affecting but not directly stemming from the health sector. There is clearly a strong potential for a country to improve its existing financing strategies for healthcare and make them feasible, equitable, efficient and sustainable. To do so, however, the country may need to critically evaluate the three basic functions of its healthcare financing system – revenue collection, risk pooling and purchasing. It also needs to draw on and where needed, adapt from the experience of other low and middle-income countries that have embarked successfully on a similar undertaking

The study also concluded that understanding financing strategies is very important and will guide the Government and the management of every healthcare institution on how

much effort they should employ in pursuing every strategy and the kind of mix that would work well for their institution. An important point is the extent to which a healthcare financing strategies and its characteristics fosters both allocative efficiency (“doing the right thing”) and technical efficiency (“doing it the right way”) in the sourcing and use of resources.

5.3 Recommendations

From the findings the study has shown that equity financing has more impact on healthcare service quality. It therefore recommended that the Government should consider reviewing its financial policy for healthcare institutions with the aim of increasing the Ex-chequer and NHIF while reducing on Out-of-Pocket form of financing. This could probably be done by ring-fencing Healthcare budget both at the National and County Governments and through conversion of NHIF to Social Health Insurance which will ensure coverage of all citizens employed or unemployed. This move will ensure both accessibility of services and its quality. The Government should also consider improving on Research Funding through collaborations and enhance partnership funding the since the study has established that Network Financing has a positive impact on service quality delivery.

The Government’s Ministry of Health should ensure no household is impoverished because of a need to use health services. One way of providing such protection is by incorporating a risk-sharing plan in the healthcare financing strategies, whereby the risk of incurring unexpected health care expenditure does not fall solely on an individual or household. The Ministry as they also try and acquire donor funding the plan should be clear on when and how the donor funding will be replaced with Government controlled financing in order to ensure service quality sustainability. This may call for a move

towards greater public financing of healthcare and universal coverage, either through the establishment of national healthcare financing systems or through social health insurance. The governments should also give higher priority to health in their budget allocations and disbursement of devolved health budget. It should also explore innovative ways of mobilizing funds for financing healthcare.

The study recommends that management of healthcare institutions should adopt financing strategies that promote service quality. The institutions should maximize the use of equity financing and network financing and minimize use of debt financing to enhance quality service delivery in hospitals. This could be done proper planning and budgeting, lobbying the Government to rationally support all healthcare providers financially in order to ensure that the institutions utilize more of equity finances to ensure quality and affordable services.

The healthcare providers should also take it upon themselves to recruit patients and clients as NHIF members so that they will be covered during the next visits.

Healthcare providers should ensure they build on research financing which will positively contribute to service quality in terms of funding and evidence based healthcare management. They should avoid debt financing and have it as the last resort if need arises. This will ensure the burden of debt payment is not transferred to the patient hence making the services unaffordable or compromised in order to spare funds for paying debts.

It is also recommended that the healthcare providers should pay attention to aspects contributing to patient satisfaction which eventually translates to better service quality. This has been attested to by the results of the perceived and expected service quality whereby there was a negative mean difference between expected and perceived quality

showing patients expectations were not met in overall even though there was no significant difference on paired sample t-test.

In addition, the prospective health investors should ensure the financial strategies adopted are best suitable for the hospital capacity. The findings has pointed out that the higher the bed capacity, the better the impact of equity financing on its service quality. On the other hand various know how there facility status affect service quality and operate accordingly. The results have shown that the type of facility only impacts on the relationship between equity financing and service quality but not on debt and network financing in relation to service quality.

5.4 Theoretical Implication

Based on review of literature and a look at previous studies, this study provides a unique contribution on financing strategies on service quality in hospitals. The study has supported the Cosby's Theory which believes that money spent on quality was money well spent. It is evident from the study that quality service leads to patients and client's satisfaction which results in their retention and loyalty to the institution. The study contributes to theory on how different financing strategies (equity, debt and network financing) and service quality in hospitals. Pecking order Theory recognizes that capital is drawn from three reservoirs: new equity, debt, and internal capital equity in an institution. The study has introduced a fourth source of funding namely network financing and which positively enhances service quality in hospitals. The study findings have also supported Tradeoff Theory, Pecking Order Theory and Finance Models which most of them indicate that financing decision impact on firm operation performance which affect quality of service offered. In addition, the study validates the Resource Based theory whose proponent considers the firm's resources against a four

characteristic criterion namely valuable, rare, in-imitable, and non-substitutable (VRIN). A resource has further been defined as any item that can be classified as an advantage or flaw of a particular corporate establishment. This theory has therefore explained how hospital resource and characteristics such as bed-capacity, age of hospital and type of hospital affect quality of service among healthcare service providers. It has also confirmed theoretical proposition that hospital bed capacity affects the relationship between financing strategies (equity, debt and network financing) and service quality in hospitals. It also provides empirical findings that support the proposition that facility type affects the relationship between financing strategies (equity, debt, and network financing) and service quality in hospitals.

5.5 Suggestions for Future Research

This study has looked at the effect of hospital characteristics impact on the relationship between financing strategies and service quality. The study used SERVQUAL model dimensions to measure quality. A further study could be conducted using other service quality models such as service performance (SERPERF). Further studies could also look at the most appropriate mix of financial sources that would result in higher impact on service quality as well as the impact of governance on financial strategies and service quality.

The researcher also suggests a need for a study on Healthcare reforms other than financial strategies and policies as the researcher found that Healthcare financing reforms on their own cannot solve all the service quality challenges in the healthcare systems. There is therefore need for reforms in other related areas such as investing in research in order to inform quality health care.

The researcher also suggests a study on Universal Healthcare and its impact on service quality could be undertaken since this will explore all aspects that will enable citizens to access quality healthcare without being limited by affordability.

The study used primary data. Future studies consider secondary data so as to compare and contrast service quality performance by different healthcare institutions while bringing together best practices that can improve on healthcare service quality.

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APPENDICES

Appendix I: Introductory Letter

I am a D. Phil student in Moi University School of Business and Economics. As a partial requirement of the coursework assessment, I am required to submit a research report on: **INTERACTIONS BETWEEN FINANCING STRATEGIES, HOSPITAL CHARACTERISTICS AND DELIVERY OF SERVICE QUALITY AMONG HEALTHCARE PROVIDERS IN KENYA**

The purpose and the objective of the study is to investigate the effect of financing strategies on delivery of quality healthcare services in level 4 to level 6 hospitals in Kenya with focus to source of financing, government interventions, revenue generating ability and levels of financing in the hospital.

The method of study will be exploratory survey since I would wish to understand more about the effect of financing strategies on the quality of services. The findings of the study are envisaged to benefit the Government as the main stakeholder in financing policy formulation and healthcare service providers in improving quality of care to the service consumers.

There are no risks associated to the study since all the information collected will be handle in confidentiality and strictly for purposes of the study. The participant also reserves the right to participate or decline to participate in the study.

I would highly appreciate if you could kindly complete the Questionnaire to assist me collect data. Your information alongside others will help me in my research and will be used strictly for academic purposes and will be treated as confidential, therefore, do not write your name on the questionnaire.

Thank you in advance,

Yours faithfully,

Lily C. Koros

Appendix II: Consent Form**Consent Form for the Client/Patient Respondent**

Research Topic: Interactions Between Financing Strategies, Hospital characteristics and Delivery of Quality Service among Healthcare Providers in Kenya

I _____(Code Number) has participated in the survey by filling in the questionnaire as an informed choice. I would like to confirm that there was no coercion whatsoever to fill the questionnaire and that I was informed that the information collected will be held in confidence and purely for the purpose of the study.

Signature_____ Date _____

Appendix III: Questionnaire For Health Care Workers

Please give answers in the spaces provided and tick (✓) in the box that matches your responses to the questions where applicable.

PART A: Demographic and Respondents profile.

Gender

Male [] Female []

What is your age bracket

Below 25 years []

25-30 years []

30-35 years []

35-40 years []

40-45 years []

45-50 years []

Above 50 years []

What is your highest level of education qualification?

Certificate []

Diploma []

Bachelors' degree []

Masters degree []

PhD []

Length of continuous service with the hospital

Less than 1 year []

Years []

3-5 years []

More than 5 years []

What is the name of the Hospital?

What is the bed capacity of the hospital?

Which year was the hospital established?

What is the type of the hospital?

Public

Private Public

Faith-Based

What level is the hospital?

Level 4

Level 5

Level 6

PART B: QUALITY OF SERVICES PROVIDED BY HEALTHCARE PROVIDER

To what extent do you agree with the following statement regarding the indicators of Delivery of quality healthcare services?

	Statement	1	2	3	4	5
	Tangibility Dimension					
1	The Hospital has up-to-date equipment					
2	The hospital's physical facilities are visually appealing					
3	The Hospital's employees are well dressed and appear neat					
4	The appearance of the physical facilities of this Hospital is in keeping with the type of services provided					
	Reliability Dimension					
5	When this hospital promises to do something by a certain time, it does so					
6	When you have a problems, this hospital is sympathetic and reassuring					
7	This hospital is dependable					
8	The hospital provides its services at the time it promises to do so					
9	The Hospital keeps its records accurately					
	Responsiveness Dimension					
10	This Hospital tells customers exactly when services will be performed					

11	You receive prompt services from the employees of this Hospital					
12	Employees of this Hospital are always willing to help customers					
13	Employees of this Hospital are not too busy to respond to customer requests promptly					
	Assurance Dimension					
14	You can trust the employees of this hospital					
15	You feel safe in your transactions with this hospital's employees					
16	Employees of this Hospital are polite					
17	Employees get adequate support from this Hospital to do their jobs well					
	Empathy Dimension					
18	The Hospital gives you individual attention					
19	Employees of this Hospital gives you personal attention					
20	Employees of this Hospital know what your needs are					
21	The Hospital have your interests at heart					
22	The Hospital has operating hours convenient to all their customers					

PART C: FIANCIAL STRATEGIES.

EFFECTS OF EQUITY FINACING STRATEGIES ON DELIVERY OF QUALITY HEALTHCARE SERVICES

To what extend do you agree with the following statements regarding effects of financing strategies on delivery of quality healthcare services

KEY: STRONGLY AGREE (5), AGREE (4), UNDECIDED; (3), DISAGREE; (2), STRONGLY DISAGREE (1)

	Statement	1	2	3	4	5
	Ex-Chequer					
1	There are increased funds for health care in the Government budget allocations					
2	Ex-chequer is the main source of the hospital funding					
3	Increasing budget allocation to the hospital improves the quality of health					

4	The Government provides adequate funds for recurrent expenditure					
5	Provision of adequate recurrent funds improves the quality of healthcare services					
6	The hospital is able to promote its employees as and when it is due					
7	Effecting staff promotions when its due improves the quality of healthcare services					
8	The Government provides adequate development funds					
9	Adequate development funds improves quality of healthcare services					
10	Government development funds has continuously increased over the years					
11	Continuous increase in development funds improves quality of healthcare services					
12	The hospital is able to procure all the critical equipment as and when they are required					
13	Hospital ability to procure all the critical equipment as and when they are required improves quality of healthcare services					
14	The Government disburses monthly funds promptly					
15	Government prompt disbursement of funds improves quality of healthcare services					
16	The Government promptly refunds the free maternity expenditure					
17	Government prompt reimbursement of free maternity funds improves quality of healthcare services					
18	Allocated funds by the government are used to improve quality of healthcare services					
19	Government financed services for under-fives is adhered to in the hospital					
20	Government financed services for under-fives enable delivery of quality healthcare					
21	Government financed services impacts positively on the quality of healthcare					

22	The funds allocated to the hospital has improved quality of healthcare service					
23	Government devolved funds have improved the quality of healthcare services					
24	There is increased support on healthcare delivery from the county governments					
25	Increased healthcare support from the County Governments has improved the quality of healthcare services					
	Out-of-Pocket					
26	Out-of-pocket is the main source of funding to the hospital					
27	The hospital collects all revenue due to the hospital from the clients/patients					
28	Collection of all revenue due to the hospital from clients/patients, improves the quality of healthcare services					
29	Out of pocket payments is afforded by all patients					
30	Out of pocket payments enable delivery of efficient and quality healthcare services					
	Insurance					
31	Insurance is the main source of funding for the hospital					
32	Insurance funding improves the delivery of quality healthcare services					
33	Private insurance sources can be accessed by most patients					
34	Accessibility of insurance by most patients improves the quality of healthcare services					
35	Private insurance funds are reliable sources for paying healthcare services					
36	Reliability of insurance sources of funding improves the quality of healthcare services					
38	There is increased group insurance (NHIF) financing					
39	Increased NHIF financing improves the quality of healthcare services					

40	NHIF reimbursements are always paid on time hence reliable					
41	Timely NHIF reimbursements improves the quality of healthcare services					
42	Most patients have NHIF insurance					
43	Accessibility by most patients to NHIF funding improves the quality of healthcare services					
44	NHIF reimbursements adequately cover the cost of services provided					
45	Adequate coverage of costs by NHIF improves the quality of healthcare services					
46	NHIF insurance provides equal cover and treatment to all beneficiaries					
47	NHIF equal treatment to all beneficiaries improves the quality of healthcare services					
48	Community pooled funding can be accessed by most patients					
49	Accessibility of community pooled funding by most patients improves quality of healthcare services					
50	Community pooled funding are reliable sources for paying user service charges					
51	Reliability of community funding sources for paying user service charges improves quality of healthcare services					
52	Community pooled funding only part of the cost of medical services					
53	Community pooled funding payment for part of medical services of improves quality of healthcare services					
54	Community support fund has helped improve service delivery					
55	Community involvement has helped subsidize costs and improve the quality of healthcare services					

EFFECTS OF DEBT FINANCING STRATEGIES ON DELIVERY OF QUALITY HEALTHCARE SERVICES

To what extent do you agree with the following statements regarding debt financing on delivery of quality healthcare services

	Statement	1	2	3	4	5
1	Bank overdraft is the main source of funding the hospital					
2	The hospital can easily access bank overdraft services					
3	The Bank Overdraft is aimed at improving healthcare service delivery					
4	The Government readily guarantees the Hospital development loans					
5	Government guaranteed loans improves the quality of healthcare services					
6	Government guaranteed loans are aimed at improving quality of services					
7	The hospital can easily access the direct bank loans to fund recurrent activities					
8	Funding recurrent activities with direct bank loans improves the quality of healthcare services					
9	The Hospital can access the direct bank loans to fund the development projects					
10	Funding development projects using direct loans improve the quality of healthcare services					

EFFECTS OF FINANCIAL NETWORKS ON DELIVERY OF QUALITY HEALTHCARE SERVICES

To what extent do you agree with the following statements regarding the effects of financial networks on delivery of quality healthcare services?

	Statement	1	2	3	4	5
1	Financial networks is the main source of funding the hospital					
2	Non-governmental organizations contributes funds that support the delivery of health care					
3	Non-governmental organizations funds improves the quality of healthcare services					

4	Non-governmental organizations are always there to support healthcare service delivery					
5	Readily availability of Non-Governmental organizations funding improves the quality of healthcare services					
6	Special contributions by the NGOs subsidizes healthcare costs incurred					
7	Special costs subsidies by the NGOs improves quality of healthcare services					
8	Most research activities are funded by Partners					
9	Research funding by partners improves the quality healthcare services					
10	The research firms are always supportive in terms of healthcare services delivery					
11	Research firms have enabled improvement of healthcare service delivery					
12	The donor funded projects are adequately funded					
13	Donor funds have improve the quality of healthcare services					
14	Donor funded projects are aim at improving quality of healthcare services					

Appendix IV: Questionnaire for Patients

Please Give Answers in the spaces provided and tick (✓) in the box that matches your responses to the questions where applicable.

PART A: Demographic and Respondents profile.

Gender

Male [] Female []

What is your age bracket

Below 25 years []

25-30 years []

30-35 years []

35-40 years []

40-45 years []

45-50 years []

Above 50 years []

What is your highest level of education qualification?

Certificate []

Diploma []

Bachelors' degree []

Masters degree []

PhD []

PART B: EFFECTS OF QUALITY OF HEALTH CARE SERVICES ON DELIVERY OF QUALITY HEALTHCARE SERVICES

To what extent do you agree with the following statements regarding the effects of quality of health care service on delivery of quality healthcare services?

	Tangibility dimension	1	2	3	4	5
1	The hospital has up to date equipment					
2	The hospital's physical facilities are visually appealing					
3	The appearance of the physical facilities of this Hospital is in keeping with the type of services provided					
4	This hospital is dependable					
5	The Hospital keeps its records accurately.					

	Reliability dimension					
6	When this hospital promises to do something by a certain time, it does so					
7	When you have a problems, this hospital is sympathetic and reassuring					
8	The hospital provides its services at the time it promises to do so					
9	The Hospital keeps its records accurately					
	Responsiveness dimension					
10	This Hospital tells customers exactly when services will be performed					
11	You receive prompt services from the employees of this hospital					
12	Employees of this Hospital are always willing to help customers.					
13	Employees of this Hospital are not too busy to respond to customer requests promptly					
	Assurance dimension					
14	You can trust the employees of this hospital					
15	You feel safe in your transactions with this hospital's employees					
16	Employees of this Hospital are polite					
17	Employees get adequate support from this Hospital to do their jobs well.					
	Empathy dimension					
18	The Hospital gives you individual attention					
19	Employees of this Hospital gives you personal attention					
20	Employees of this Hospital know what your needs are					
21	The Hospital have your interests at heart					
22	The Hospital has operating hours convenient to all their customers					

Appendix V: Output

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling adequacy.	.825
Bartlett's Test of Sphericity	6405.449
Approx. Chi-Square	1035
Df	.000
Sig.	

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.102	24.134	24.134	11.102	24.134	24.134
2	4.184	9.095	33.230			
3	3.931	8.545	41.775			
4	2.525	5.489	47.263			
5	2.214	4.813	52.076			
6	1.984	4.313	56.389			
7	1.577	3.429	59.818			
8	1.367	2.972	62.790			
9	1.238	2.691	65.481			
10	1.184	2.573	68.055			
11	1.093	2.376	70.431			
12	1.031	2.241	72.672			
13	.925	2.011	74.682			
14	.868	1.886	76.568			
15	.785	1.707	78.275			
16	.749	1.628	79.903			
17	.715	1.555	81.458			
18	.646	1.405	82.863			
19	.607	1.319	84.182			
20	.561	1.219	85.401			
21	.494	1.075	86.476			
22	.476	1.034	87.510			
23	.457	.994	88.504			
24	.428	.930	89.433			
25	.413	.897	90.331			
26	.380	.826	91.157			
27	.364	.791	91.948			
28	.345	.750	92.698			
29	.300	.653	93.351			
30	.294	.640	93.991			
31	.277	.603	94.594			
32	.251	.545	95.139			
33	.246	.535	95.674			
34	.236	.514	96.187			
35	.216	.469	96.656			
36	.210	.457	97.113			
37	.190	.413	97.526			
38	.168	.366	97.892			
39	.155	.336	98.228			
40	.146	.318	98.546			
41	.133	.289	98.835			
42	.128	.279	99.114			
43	.119	.258	99.372			
44	.102	.221	99.593			
45	.098	.213	99.806			
46	.089	.194	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component 1
There are increased funds for health care in government budget allocations	
Increasing budget allocation to the hospital improves the quality of health	
The Government provides adequate funds for recurrent expenditure	
The hospital is able to promote its employees as and when its due	
Effecting staff promotions when its due improves the quality of healthcare services	
The Government provides adequate development funds	
Government development funds has continuously increased over the years	
The hospital is able to procure all the critical equipment as and when they are required	
Hospital ability to procure all the critical equipment as and when they are required improves quality of healthcare services	
The Government disburses monthly funds promptly	.572
The Government promptly refunds the free maternity expenditure	.629
Allocated funds by the government are used to improve quality of healthcare services	
Government financed services for under-fives is adhered to in the hospital	
Government financed services for under-fives enable delivery of quality healthcare	
Government financed services impacts positively on the quality of healthcare	.563
The funds allocated to the hospital has improved quality of healthcare service	.542
Government devolved funds have improved the quality of healthcare services	
There is increased support on healthcare delivery from the county governments	.539
Increased healthcare support from the County Governments has improved the quality of healthcare services	.617
The hospital collects all revenue due to the hospital from the clients/patients	
Collection of all revenue due to the hospital from clients/patients, improves the quality of healthcare services	.580
Out of pocket payments is afforded by all patients	
Out of pocket payments enable delivery of efficient and quality healthcare services	.507
Insurance funding improves the delivery of quality healthcare services	
Private insurance sources can be accessed by most patients	
Accessibility of insurance by most patients improves the quality of healthcare services	
Private insurance funds are reliable sources for paying healthcare services	
Reliability of insurance sources of funding improves the quality of healthcare services	.587
There is increased group insurance (NHIF) financing	
Increased NHIF financing improves the quality of healthcare services	
NHIF reimbursements are always paid on time hence reliable	
Timely NHIF reimbursements improves the quality of healthcare services	.564
Most patients have NHIF insurance	
Accessibility by most patients to NHIF funding improves the quality of healthcare services	.572
NHIF reimbursements adequately cover the cost of services provided	
Adequate coverage of costs by NHIF improves the quality of healthcare services	.511
NHIF insurance provides equal cover and treatment to all beneficiaries	
NHIF equal treatment to all beneficiaries improves the quality of healthcare services	
Community pooled funding can be accessed by most patients	
Accessibility of community pooled funding by most patients improves quality of healthcare services	.600
Community pooled funding are reliable sources for paying user service charges	.580
Reliability of community funding sources for paying user service charges improves quality of healthcare services	.713
Community pooled funding only part of the cost of medical services	.744
Community pooled funding payment for part of medical services of improves quality of healthcare services	.703
Community support fund has helped improve service delivery	.741
Community involvement has helped subsidize costs and improve the quality of healthcare services	.654

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	1518.242
	df	36
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.609	62.324	62.324	5.609	62.324	62.324
2	1.166	12.960	75.283			
3	.595	6.612	81.896			
4	.485	5.390	87.285			
5	.360	4.000	91.285			
6	.291	3.231	94.516			
7	.235	2.606	97.122			
8	.152	1.688	98.811			
9	.107	1.189	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
The hospital can easily access bank overdraft services	.703
The Bank Overdraft is aimed at improving healthcare service delivery	.822
The Government readily guarantees the Hospital development loans	.782
Government guaranteed loans improves the quality of healthcare services	.804
Government guaranteed loans are aimed at improving quality of services	.692
The hospital can easily access the direct bank loans to fund recurrent activities	.795
Funding recurrent activities with direct bank loans improves the quality of healthcare services	.857
The Hospital can access the direct bank loans to fund the development projects	.808
Funding development projects using direct loans improve the quality of healthcare services	.827

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.855
Bartlett's Test of Sphericity	Approx. Chi-Square
	1869.107
	df
	91
	Sig.
	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.367	45.476	45.476	6.367	45.476	45.476
2	1.514	10.814	56.291			
3	1.250	8.929	65.219			
4	1.094	7.812	73.031			
5	.942	6.732	79.763			
6	.623	4.452	84.215			
7	.528	3.772	87.987			
8	.370	2.641	90.628			
9	.337	2.409	93.037			
10	.241	1.718	94.756			
11	.214	1.531	96.287			
12	.203	1.447	97.734			
13	.169	1.206	98.940			
14	.148	1.060	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
Financial networks is the main source of funding the hospital	
Non-governmental organizations contribute funds that support the delivery of health care	.610
Non-governmental organizations funds improve the quality of healthcare services	.675
Non-governmental organizations are always there to support healthcare service delivery	.510
Readily availability of Non-Governmental organizations funding improves the quality of healthcare services	.757
Special contributions by the NGOs subsidizes healthcare costs incurred	.764
Special costs subsidies by the NGOs improves quality of healthcare services	.829
Most research activities are funded by Partners	.637
Research funding by partners improves the quality healthcare services	.775
The research firms are always supportive in terms of healthcare services delivery	.685
Research firms have enabled improvement of healthcare service delivery	.704
The donor funded projects are adequately funded	.667
Donor funds have improve the quality of healthcare services	.711
Donor funded projects are aim at improving quality of healthcare services	.600

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix VI: List of Specific Sampled Hospitals

		Sampled Hospitals	Level 4	Level 5	Level 6	Total
1	Baringo		3	0		3
	Level 4	Eldama Ravine District Hospital Mercy Hospital Kabarnet District Hospital				
2	Bomet		3	1		4
	Level 5	Tenwek Mission Hospital (5)				
	Level 4	Longisa District Hospital Kaplong Mission Hospital				
3	Bungoma		5	0		5
	Level 4	Bungoma District Hospital Kimilili District Hospital Lugulu Friends Mission Hospital Mt Elgon District Hospital Webuye Hospital				
4	Busia		3	0		3
		Webuye Hospital Busia District Hospital Holy Family Nangina Hospital				
5	Elgeyo Marakwet					
6	Embu		4	1		5
	Level 5	Embu Provincial General Hospital – Embu				
	Level 4	Consolata Hospital Kyeni Mbeere District Hospital Runyenjes District Hospital				
7	Garissa					
8	Homa Bay		3	0		3
	Level 4	Kendu Bay Adventist Hospital Rachuonyo District Hospital Suba District Hospital				
9	Isiolo					
10	Kajiado		6	0		6
	Level 4	Kajiado District Hospital				

		Loitokitok District Hospital Magadi Hospital Ngong Rapha Hospital Sinai Mount Hospital St Paul's Hospital				
11	Kakamega		7	1		8
	Level 5	Kakamega Provincial General Hospital (PGH)				
	Level 4	Diocese Of Kakamega St Maryys Mission Hospital Kakamega St. Elizabeth Mission Hospital Mukumu Butere District Hospital Lumakanda District Hospital Malava District Hospital Mukumu Hospital				
12	Kericho		8	1		9
	Level 5	James Finlay Central Hospital				
	Level 4	A.I.C Litein Hospital Greenview Hospital Kapkatet District Hospital Kericho District Hospital Kericho Nursing Home Kipchimchim M Hospital Siloam Hospital Unilever Central Hospital				
13	Kiambu		17	1		18
	Level 5	Thika Level 5 Hospital				
	Level 4	A.I.C Cure International Childrens Hospital A.I.C Kijabe Hospital Eddiana Hospital Gatundu District Hospital Holy Family Mission Hospital Githunguri Immaculate Heart of Mary Hospital Jkuat Hospital Kalimoni Hospital (Thika) Kiambu District Hospital Kikuyu (PCEA) Hospital Radiant Group of Hospital (Kiambu) St Judes Nursing Hospital St.Teresa Hospital Kiambu				

		Thika Nursing Home Tigoni District Hospital				
14	Kilifi					
15	Kirinyaga		2			2
	Level 4	Kerugoya District Hospital Mwea Mission (Our Lady of Lourdes) Hospital				
16	Kisii		11	1		12
	Level 5	Kisii Hospital (Level 5)				
	Level 4	Bethania Holy Mission Hospital Christamarianne Mission Hospital (Asumbi) Franciscan Sisters of St. Joseph Tabaka Mission Hospital Gucha District Hospital Hema Hospital Kenyena District Hospital Marani District Hospital Nduru District Hospital Nyamache District Hospital				
17	Kisumu		10	1		11
	Level 5	Nyanza Provincial General Hospital (PGH)				
	Level 4	A.C.K Maseno Hospital Kisumu District Hospital Kombewa District Hospital Masaba Hospital Kisumu Maseno Mission Hospital Milimani Hospital Nyabondo Mission Hospital Nyando District Hospita St Monica Hospital				
18	Kitui		5	0		5
	Level 4	Muthale Mission Hospital Mutomo Mission Hospital Kitui District Hospital Kyuso District Hospital Mwingi District Hospital				
19	Kwale					
20	Laikipia		2	0		2
	Level 4	Nyahururu District Hospital				

		Nyahururu Private Hospital				
	Level 4					
21	Lamu					
22	Machakos		5	1		6
	Level 5	Machakos Level 5 Hospital				
	Level 4	Bishop U. J. Kioko Catholic Hospital Kangundo District Hospital Kathiani District Hospital Matuu District Hospital				
23	Makueni		2	0		2
	Level 4	Makindu District Hospital SulemanFarooq Memorial Centre				
24	Mandera					
25	Marsabit					
26	Meru		13	1		14
	Level 5	Meru District Hospital				
	Level 4	Consolata Hospital Nkubu Diocese of Meru St. Theresa Mission Hospital – Kiirua Maua Methodist Hospital P.C.E.A Chogoria Hospital St. John of God Catholic Hospital Tigania St. Orsola Mission Hospital Githongo District Hospital Kanyakine District Hospital Miathene District Hospital Nyambene District Hospital St Theresa Kiirua Hospital (Kiirua) Tigania Hospital				
27	Migori		8	0		8
	Level 4	St. Camillus Mission Hospital Karungu St. Josephs Mission Hospital – Migori Kegonga District Hospital Mountain Hospital Kuria District Hospital Migori District Hospital				

		Ojele Memorial Hospital Rongo District Hospital				
28	Mombasa		10	4		14
	Level 5	Coast Province General Hospital Aga Khan Hospital The Mombasa Hospital Pandya Memorial Hospital				
	Level 4	Mary Immaculate Cottage Hospital Bomu Medical Hospital (Changamwe) Kenya Navy (Mir) Hospital Lady Grigg Maternity Hospital (CPGH) Likoni District Hospital Port Reitz District Hospital				
29	Muranga		4	0		4
	Level 4	Kiriaini Mission Hospital Gaichanjiru Hospital Githumu Hospital Maragua District Hospital				
30	Nairobi		22	4	6	32
	Level 6	Kenyatta National Hospital Mathari Hospital National Spinal Injury Hospital The Nairobi Hospital Aga Khan University Hospital Nairobi West Hospital				
	Level 5	Pumwani Maternity Hospital The Karen Hospital Mp Shah Hospital The Nairobi Women Hospital – Hurlingham				
	Level 4	Edelvastrust Jamaa Home and Mission Hospital Maria Immaculate Hospital Lavington Nazareth Mission Hospital RuarakaUhaiNeema Hospital St. Marys Mission Hospital The Mater Hospital Avenue Hospital				

		Coptic Hospital (NgongRoad) Guru Nanak Hospital Huruma Maternity Hospital Jamaa Mission Hospital Kamiti Prison Hospital Langata Hospital Mama Lucy Kibaki Hospital – Embakasi Mbagathi District Hospital Memorial Hospital Meridian Equator Hospital Metropolitan Hospital Nairobi Moi Air Base Hospital Nairobi South Hospital St Francis Community Hospital (Kasarani) St John Hospital Limited				
31	Nakuru		12	2		14
	Level 5	Nakuru Provincial General Hospital (PGH) The Nairobi Women Hospital – Nakuru				
	Level 4	St. Marys Mission Hospital Riftvalley Branch Annex Hospital (Nakuru) Bahati District Hospital Gilgil Military Regional Hospital Karuturi Hospital Mediheal Hospital Nakuru Molo District Hospital Mt Longonot Hospital Naivasha District Hospital Nakuru War Memorial Hospital Polyclinic Hospital Valley Hospital				
32	Nandi		3	0		3
	Level 4	Mother Francisca Mission Kapsabet District Hospital Nandi Hills District Hospital				
33	Narok		4	0		4
	Level 4	Narok District Hospital Ololulunga District Hospital St Joseph Hospital Transmara District Hospital				
34	Nyamira		2	0		2

	Level 4	Manga District Hospital Nyamira District Hospital				
35	Nyandarua		2	0		2
	Level 4	Engineer District Hospital North Kinangop Catholic Hospital				
36	Nyeri		4	1		5
	Level 5	Nyeri Provincial General Hospital (PGH)				
	Level 4	Consolata Mission Hospital (Mathari) Karatina District Hospital Outspan Hospital Tumutumu (PCEA) Hospital				
37	Samburu					
38	Siaya		4	0		4
	Level 4	St. Annes Sega Mission Hospital Bondo District Hospital Dolphil Nursing & Maternity Home Siaya District Hospital				
39	Taita Tavete		4	0		4
	Level 4	Dawida Maternity Nursing Home Moi District Hospital Voi Taveta District Hospital Wesu District Hospital				
40	Tana River					
41	Tharaka Nithi		6	0		6
	Level 4	Chogoria (PCEA) Hospital Chuka District Hospital Magutuni District Hospital St Lucy's Hospital St Orsola Mission Hospital Tharaka District Hospital				
42	Tranzoia		4	0		4
	Level 4	Mutomom Mission Hospital Cherangany Nursing Home				

		Endebess District Hospital Kitale District Hospital				
43	Turkana					
44	Uasin Gishu		6	2	1	9
	Level 6	Moi Teaching And Referral Hospital				
	Level 5	Eldoret Hospital Racecourse Hospital				
	Level 4	Trinity Mission Hospital Leseru Eldoret Hospital Elgon View Hospital Mediheal Hospital St LukesOrthopaedic and Trauma Hospital Uasin Gishu District Hospital				
45	Vihiga		2	0		2
		Kaimosi Mission Hospital Vihiga District Hospital				
46	Wajir					
47	West Pokot					
			206	20	7	233

Appendix VII: NACOSTI Permit Card

1. **You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.**


2. **Government Officers will not be interviewed without prior appointment.**

3. **No questionnaire will be used unless it has been approved.**

4. **Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**

5. **You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**

6. **The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**



REPUBLIC OF KENYA
NACOSTI
National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A-8044

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:


MS. LILY CHEPKORIR KOROS

of KENYATTA NATIONAL HOSPITAL

20723-202 Nairobi, has been permitted to conduct research in All Counties

on the topic: INTERACTIONS BETWEEN FINANCING STRATEGIES, INSTITUTIONAL CHARACTERISTICS AND DELIVERY OF SERVICE QUALITY AMONG HEALTHCARE PROVIDERS IN KENYA

for the period ending 1st March 2017



Permit No: NACOSTI/P/16/90379/9650
Date Of Issue : 29th February, 2016
Fee Received : ksh 2000

[Signature]
Director General
National Commission for Science, Technology & Innovation

Applicant's Signature

Appendix VIII: NACOSTI Research Authorization



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No.

NACOSTI/P/16/90379/9650

Date:

29th February, 2016

Lily Chepkorir Koros
Kenyatta National Hospital
P. O. Box 20723
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Interactions between financing strategies, institutional characteristics and delivery of service quality among healthcare providers in Kenya”* I am pleased to inform you that you have been authorized to undertake research in **all Counties** for a period ending **1st March, 2017**.

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

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioners
All Counties.

The County Directors of Education
All Counties.



Appendix XI: MU Permit**MOI UNIVERSITY
SCHOOL OF BUSINESS AND ECONOMICS**

Tel: (053) 43287
Fax No: (053) 43360
Telex No. 35047 MOIUNIVERSITY
REF: SBE/D.PHIL/BM/021/10

Box 3900
Eldoret
KENYA

DATE: 24th June, 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: LILY C. KOROS - SBE/D.PHL/BM/021/10

The above named is a bonafide student of Moi University, School of Business and Economics pursuing a Doctor of Philosophy degree in Business Management.

She has completed course work, defended her proposal and is proceeding to the field to collect data for her research entitled: *"Interactions Between Financing Strategies, Institutional Characteristics and Delivery of Quality Services Among Healthcare Providers in Kenya."*

Please accord her any necessary assistance and support.

Yours faithfully,

DEAN
SCHOOL OF BUSINESS
& ECONOMICS
MOI UNIVERSITY

PROF. THOMAS CHERUIYOT
DEAN, SCHOOL OF BUSINESS AND ECONOMICS

Appendix XII: MoH Clearance Letters



MINISTRY OF HEALTH

Telephone: Nairobi 254-020-2717077
 Fax: 254-2719008
 Email: ps@health.go.ke

AFYA HOUSE
 CATHEDRAL ROAD
 P. O Box 30016-00100
 NAIROBI

When replying please quote

Ref. MOH/ADM/3/1

24th March, 2016

Chief Executive Officer
 Kenyatta National Referral Hospital
 NAIROBI

**RE: PERMISSION TO CONDUCT RESEARCH ON "INTERACTIONS
 BETWEEN FINANCING STRATEGIES, INSTITUTIONAL CHARACTERISTICS
 AND DELIVERY OF QUALITY SERVICES AMONG HEALTH PROVIDERS IN
 KENYA IN THE NATIONAL HOSPITALS**

Lily Koros of Moi University School of Business and Economics has requested to conduct the above research in selected health facilities, including the National Hospitals.

We have reviewed the study proposal and confirmed that it has been cleared by the KNH/UoN-ERC to proceed during 13th January 2016 – 12th January 2017. The investigator has also received clearance from National Commission for Science Technology and Innovation (NACOSTI). In view of the above, no further clearance is required by the Ministry of Health to conduct the said research in the National Hospitals.

The Ministry of Health therefore, has no objection to this study proceeding as proposed. Please accord her necessary support and find attached herewith the supporting documents.


 Dr. Jackson Kioko
 Ag. DIRECTOR OF MEDICAL SERVICES



MINISTRY OF HEALTH

Telephone: Nairobi 254-020-2717077
 Fax: 254-2719008
 Email: ps@health.go.ke

AFYA HOUSE
 CATHEDRAL ROAD
 P. O Box 30016-00100
 NAIROBI

When replying please quote

Ref. MOH/ADM/3/1

24th March, 2016


Chief Executive Officer
 Moi Teaching & Referral Hospital
ELDORET

**RE: PERMISSION TO CONDUCT RESEARCH ON "INTERACTIONS
 BETWEEN FINANCING STRATEGIES, INSTITUTIONAL CHARACTERISTICS
 AND DELIVERY OF QUALITY SERVICES AMONG HEALTH PROVIDERS IN
 KENYA "IN THE NATIONAL HOSPITALS**

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The Ministry of Health therefore, has no objection to this study proceeding as proposed. Please accord her necessary support and find attached herewith the supporting documents.


 Dr. Jackson Kioko
Ag. DIRECTOR OF MEDICAL SERVICES



MINISTRY OF HEALTH

Telephone: Nairobi 254-020-2717077
 Fax: 254-2719008
 Email: ps@health.go.ke

AFYA HOUSE
 CATHEDRAL ROAD
 P. O Box 30016-00100
 NAIROBI

When replying please quote

Ref. MOH/ADM/3/1

24th March, 2016

Chief Executive Officer
 Mathari National & Referral Hospital
NAIROBI

**RE: PERMISSION TO CONDUCT RESEARCH ON “INTERACTIONS
 BETWEEN FINANCING STRATEGIES, INSTITUTIONAL CHARACTERISTICS
 AND DELIVERY OF QUALITY SERVICES AMONG HEALTH PROVIDERS IN
 KENYA IN THE NATIONAL HOSPITALS**

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The Ministry of Health therefore, has no objection to this study proceeding as proposed. Please accord her necessary support and find attached herewith the supporting documents.

Dr. Jackson Kioko
Ag. DIRECTOR OF MEDICAL SERVICES

Appendix XIII: KNH/UON IREC Clearance



UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
(254-020) 2726300 Ext 44355



KNH-UON ERC
Email: uonknh_erc@uonbi.ac.ke
Website: <http://www.erc.uonbi.ac.ke>
Facebook: https://www.facebook.com/uonknh_erc
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC



KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/7

13th January 2016

Lily Chepkorir Koros
SBE/D.PHIL/021/10
School of Business and Economics
Moi University

Dear Lily

Revised research proposal: Interactions between Financing Strategies, Institutional Characteristics and Delivery of Quality Service among Healthcare providers in Kenya (P604/09/2015)

This is to inform you that the KNH- UoN Ethics & Research Committee (KNH-UoN ERC) has reviewed and **approved** your above proposal. The approval periods are 13th January 2016 –12th January 2017.

This approval is subject to compliance with the following requirements:

- a) Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
- b) All changes (amendments, deviations, violations etc) are submitted for review and approval by KNH-UoN ERC before implementation.
- c) Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
- d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH- UoN ERC within 72 hours.
- e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (*Attach a comprehensive progress report to support the renewal*).
- f) Clearance for export of biological specimens must be obtained from KNH- UoN ERC for each batch of shipment.
- g) Submission of an *executive summary* report within 90 days upon completion of the study.
This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/ or plagiarism.

For more details consult the KNH- UoN ERC website <http://www.erc.uonbi.ac.ke>

Protect to discover