# Determinants of Performance of National Hospital Insurance Fund's Designated Health Care Service Providers in Kenya

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## Determinants of Performance of National Hospital Insurance Fund's Designated Health Care Service Providers in Kenya

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A Thesis Submitted in Partial Fulfillment for the Degree of Doctor of Philosophy in Business Administration in the Jomo Kenyatta University of Agriculture and Technology

#### DECLARATION

This thesis is my original work and has not been presented for a degree at any University.

Signature ...... Date .....

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### DEDICATION

This thesis is dedicated to my beloved family, my wife Esther C. Mirenga, my sons Edward O. Mirenga and Eric O. Mirenga for their endless support throughout the period of the study and especially as I was unwell. May God bless you all.

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## LIST OF ABBREVIATIONS AND ACRONYMS

CRM	Customer Relationship Management
GNP	Gross National Product
LOK	Legislation Ordinance of Kenya
MRI	Magnetic Resonance Imaging
NHIF	National Hospital Insurance Fund
RBPM	Result Based Performance Management
S.P.S.S.	Statistical Package for Social Scientists
SERVQUAL	Service Quality
SME	Small and Medium Enterprises

#### **DEFINITION OF TERMS**

- Analogous: Similar in some way to another thing or situation and able to be compared with it (Ndung'u, 2009).
- Asymptotically Stagnant Impersonal Services: These are services whose characteristics are a mixture of stagnant personal and progressive impersonal services (Fitzsimmons & Fitzsimmons, 2008).
- **Bidirectional Optimization:** Value in service supply relationship where the customer is also a supplier in the service exchange (Narayanan, 2009).
- **Communication:** The transmission of information and its receipt involving the exchange of data, opinion and sentiment. Internally communication will provide the firm with new opportunities of linkages and efficiency. Externally, it is the crucial interface with both the supply chain and the customer (Fawcett, Ellram, & Ogden, 2008).

Conformance: To agree with or match something (Mugenda & Mugenda, 2003).

- Duality:The state of having two parts or aspects (Fitzsimmons & Fitzsimmons,<br/>2008).
- **Financial efficiency:** A financial perspective, typically using measurers like cash flow, return on equity, sales, and income growth (Kothari, 2008),
- **Harmonization:** The act or state of being properly positioned, especially in relation to one another (Armstrong, 2014).
- Hub:The central and most important part of a particular place or activity<br/>(Fitzsimmons & Fitzsimmons, 2008).

- **Market research:** The systematic design collection, analysis and reporting of data and findings relevant to a specific marketing situation "Listening to the customer" (Aaker, Day & Kumar, 2009)
- **Performance:** The accomplishment, execution, carrying out and working out of anything ordered or undertaken (Ndung'u, 2009)
- **Perishability:** Services are difficult to inventory. They perish if not consumed simultaneously as they are produced (Czinkota & Kotabe, 2009).
- **Process efficiency:** Fundamental rethinking and radical redesign of business process (Laudon & Laudon, 2010).
- **Progressive Impersonal Services:** Services that do not necessarily required the customer's involvement (Hacksever, *et al.*, 2006)
- **Service Recovery:** Unconditional service guarantee offered in anticipation of a service failure (Fitzsimmons & Fitzsimmons, 2008).
- Service System: A service organization exists to provide a service to its customers. It is defined and shaped by its mission, strategies and policies (Hacksever, Render, Russel, & Murdick, 2006).
- Services: Economic activities that produce time, place, form, and psychological utilities (Fitzsimmons & Fitzsimmons, 2008).
- Stagnant Personal Services: Services that are by their nature, most resistant to productivity improvement efforts (Narayanan, 2009).
- **Taxonomy:** The scientific process of classifying things, arranging into groups (Saunders, et al., 2002).

**Working relations:** An approach to management which seeks to establish long term relationships with customers based on trust and mutual cooperation, involving personal contacts and bonds between customers and the organization resulting in mutual obligation, common goals, empathy and integration of all organizational activities (Bateman & Snell, 2010).

#### ABSTRACT

An act of parliament Cap 255, LOK, established the National Hospital Insurance Fund (NHIF) on 12<sup>th</sup> July 1966, replacing the then European, Asian and Arabs' Hospital Fund which catered for the three communities only. The problem, which forms the basis of the study, is that there have been no studies directly focusing on the determinants of service performance by the National Hospital Insurance Fund (NHIF) designated health care service providers in Kenya, since the inception of NHIF in 1966. The main objective of the study was to investigate the determinants of service performance of the designated health care service providers in Kenya. The specific objectives of the study were: to determine if market research influenced service performance, to assess whether working relations had an impact on service performance, to establish if communication had an influence on service performance and to find out whether harmonization had a role to play on service performance of the NHIF designated health care service providers in Kenya. The five hospitals selected for the study were: Kenyatta National Hospital, Nairobi Hospital, Aga Khan, MP Shah, and Mbagathi hospitals. The population for the study consisted of members of staff of the five hospitals in management, administration and wards. The target population for each hospital was 75 members of staff, comprising of 20 managers, 25 administration members and 30 ward workers. The study used stratified random sampling where the population was divided into mutually exclusive and collectively exhaustive categories and were issued with questionnaires. Ouestionnaires with both close ended and open ended questions were the data collection instrument used in the study. Data analysis was done using descriptive and inferential statistical tools. Data was then processed using Statistical Package for Social Scientists (S.P.S.S.). The resultant information was presented by tables and charts. From the study, it is evident enough that the better the knowledge that the employees have concerning a particular health care service provided by NHIF's health care service provider, the more it is practiced. On the basis of Market Research and Service Performance and from the findings, there was a significant relationship between the two variables. The researcher recommends that the employees should be educated on market research putting more emphasis on its meaning, how it works and how it can benefit the organization. It could be seen that however less knowledge about this variable the employees of the NHIF designated health care service provider had, the variable could still have a positive impact on the performance, so a little emphasis on it would be favorable to the organization as far as its returns are concerned. In regard to Working relations and service Performance there was a significant relationship between the two and it seems that the organization understands the meaning of the working relationship and even how it works and the relationship with performance is also positive. The extent of its positivity towards performance cannot go without say. The study hence recommends that the market research should be enhanced wherever necessary and as much as possible for the benefit of the public. There was a significant relationship between Communication and Service Performance. Due to the positive correlation with the performance, and as such the researcher recommends that NHIF, through its

designated health care service providers, should embrace communication to improve on the performance. The researcher also recommends that the employees should be trained further on the variable to enhance bidirectional optimization, management of productive capacity and management of perishability for better service performance in the organization.

#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 Background of the Study

There has been a surge of interest in all aspects of service management in recent times. Many books, articles, and research papers on services and service management have appeared in the popular, as well as, academic and business literature, during the 1980s and 1990s (Haksever et al., 2006). The impetus for this phenomenon can be traced back to two major developments in recent history. First, the performance and quality movement which brought most consumers, news media, and academicians to the realization that the overall performance and quality of services around many parts of the world was not ideal, acceptable, or competitive globally. Second, the fact that services no longer formed the least important sector of the economy became obvious.

Contrary to the once widely held view, among economists, services have increasingly played a significant role in the economic life in world economies, both developed and developing. Growing attention paid to service quality and customer satisfaction has stirred managers of many service organizations into action, especially in the areas of performance. Even the executives and managers of a service conglomerate, everyone would love to criticize, like the government, has not been immune to the mounting pressure (Czinkota & Kotabe, 2009). A lot has been done to improve quality and customer satisfaction in most service industries, during the 1980s and 1990s. As a result, there have been marked improvements in the quality of many services. Nevertheless, poor service quality is still a fact of life in many countries, around the world.

This study sought to focus on examining the factors inherent in determining service performance of NHIF designated health care service providers in Kenya, specifically, hospitals; their performance in the process of carrying out their core functions of providing effective, efficient, and satisfactory services to their customers and stakeholders. It focuses on the NHIF designated health care service providers in Kenya which are concerned with efforts of obtaining results and providing information to help determine what needs to be improved. The Institutions combine the management process in a single, interactive, and collaborative work space. The hospitals, on behalf of NHIF, have to achieve high performance which is associated with appropriate organizational structure involving how activities are divided, organized, and coordinated. In fact, it is impossible to understand an organization's strategy, without High performance requires organizational behaviour, examining its structure. concerning how organizations function and how people relate to them through their conduct, perception and intentions, both individually or in groups (Bateman & Snell, 2010). Organizational behaviour draws heavily on the social and behavioral sciences, especially sociology and industrial psychology and on the theory and practice of organizational design. Thus, organizational behaviour can help enhance effective use of necessary skills, knowledge, and competencies in organizations like the National Hospital Insurance Fund's designated health care service providers in Kenya.

Besides organizational structure and behaviour, service providing institutions need to be conversant with and thorough knowledge of service characteristics which affect their performance. The designated health care service providers should know the distinctive features of services – services differ from goods, most strongly in their intangibility, the intangibility important implications. The implications range from difficult competitive comparisons to financing, and makes precise specifications almost impossible.

Though the intangibility of services is a primary differentiating criterion, it is always present. Therefore, the management of the intangible component of the service provided by the NHIF designated health care service providers that lead to the final product is of major concern to both the provider of the service and the recipient of the ultimate output which reflects performance. Services are difficult to inventory. If services are not used the "brown around the edges" syndrome makes them highly perishable. Unused

capacity cannot be stored for future use and similarly the difficulty of inventorying services makes it troublesome to provide service backup for peak demand. To maintain constant service capacity at levels necessary to satisfy peak demand would be very expensive. The manager must, therefore, attempt to smooth out demand levels in order to optimize overall use of capacity. It is possible that NHIF on behalf of taxpayers can pay for expensive unused capacity inherent in the management performance by its designated health care service providers at the tax-payer's expense (Fitzsimmons & Fitzsimmons, 2008).

For many services the time of production is very close to or even simultaneous with the time of consumption. Customers frequently either service themselves or cooperate in the delivery of services. This phenomenon is true in the health care services offered by the NHIF designated hospitals. It requires the presence of the service provider when the service is delivered; which creates both problems and opportunities. The problem of close interaction with the customer requires much greater understanding of the customer needs, through culture and or personality (Zeithaml & Bitner, 2007). Furthermore, many services are customized contradicting the possibility of standardizing of service offerings. This is against the possibility that it offers the service provider an opportunity to differentiate the service. The concomitant problem is that in order to fulfill customer expectations, consistency is required. The issue of quality control affect the service provider, as well as, the service recipient because efforts to increase control through uniform service may be perceived by customers as the limiting of options which may, therefore, have a negative effect on service performance.

Observing and evaluating services is difficult, especially when choosing intelligently among the different health care service providers designated by National Hospital Insurance Fund. Service heterogeneity results in services that may not be same from one delivery to another. It is, therefore, difficult to compare services to one another, meaning that for the buyers and often also suppliers the transparency of the service market is low (Haksever et al., 2006). Service performance and quality may vary for

each delivery. Therefore, performance and quality measurements are quite challenging. In response to this challenge, much research work has been carried out in the service quality measurement field. The most visible effort consisted of the SERVQUAL model, which proposed a series of measures to determine the discrepancy between expectations and perceptions of services by customers. Over time, the measurers used have been significantly expanded and refined.

Most researchers agree that the most important tool for service design and evaluation is blueprinting. Blueprinting refers to a visual definition of a service process that displays each sub-process or step in the service system and links the various steps in the sequence in which they appear (Czinkota & Kotabe, 2009). A service blueprint then allows the identification of processes that are visible to the customer, those that are invisible and the possible failure points. An understanding of the processes and their linkages then allows the firm to design performance and quality into the service. This approach would be appropriate for the NHIF's designated health care service providers. The measurement of capacity and delivery efficiency often remains highly qualitative rather than quantitative. Furthermore, the intangibility of the service reduces the manager's ability to provide samples which makes communicating the service offered much more difficult than communicating an offer of goods. In service delivery the role of personnel deserves special consideration because customer interface is intense requiring proper and intense training for personnel both domestically and internationally. The person delivering the service - rather than the service itself - will communicate the spirit, value, and attitudes of the service corporation. This, in the case of the NHIF designated health care service providers, requires that the individual interaction desired points to the need for careful decentralization of service delivery which in turn requires delegation of large amounts of responsibility to individuals and service subsidiaries – demanding a great deal of trust, effective communication, harmony in all organizational units. Research has shown that service firms, in their international expansion, tend to greatly prefer the establishment of full control ventures. Only when costs escalate and the company specific advantage diminishes will they seek out shared control ventures (Czinkota & Kotabe, 2009). In the case of NHIF designated health care service providers, the study seeks to establish how much control it will have on the new venture, as it expands its mandate. The organization is, therefore, defined and shaped by its mission, its strategies, and policies as shown in Figure 1.1.

In the case of NHIF the desired mission is "To provide accessible, affordable, sustainable, and quality social health insurance to the majority of Kenyan residents, through effective and efficient utilization of resources to the satisfaction of customers" (Arasa, 2009).



Figure 1.1: The Service System

The operations system designs the service package and the delivery system in cooperation with marketing, finance, and human resources – other functions include day-to-day running of the system, deploying the resources to produce the services and providing input for personnel training. The marketing system manages the organization's contact with customers, including, advertising, sales, promotion, distribution, and market research. In this case operations and marketing functions overlap in many cases. In general operations and marketing have to work closely and cooperate for success – the most important of which is the design of the service and the delivery system. The marketing system collects data and provides information to operations, concerning customer needs and requirements which is the main input to the design process. The service design should also consider the organization's mission, strategies, competencies, and resources. Other inputs to service design include environmental factors, such as, laws and government regulations, customs, and social norms (Haksever *et al.*, 2006).

The objective of the design process is to determine what benefits to provide to the customer. The design of the delivery system aims at determining where, when, and how these benefits should be provided. A service delivery system consists of equipment and physical facilities processes, and personnel. Service personnel play a crucial role in service delivery and success of the organization and the selection, hiring, and training of service providers are facilitated by the human resource function (Czinkota & Kotabe, 2009). The material gains of a society are achieved by adding value to natural resources. In many societies these days, there are many organizations that extract raw materials, add value, through processing them and transform intermediate materials and components into finished products. There are, however, other organizations that facilitate the production and distribution of goods, and organizations that add value to our personal lives, through a variety of intangibles they provide. The outputs of these latter groups are called services.

In Kenya, from a macro view point, the economy may be divided into three different sectors: the extractive sector which includes mining and agriculture, the goods producing sector which includes manufacturing and construction, and the service sector. The service sector has a tremendous impact on Kenya's economy in employment, gross domestic product, number of business start-ups and contribution to manufacturing.

Most countries have succeeded in economic development, through creation of Small and Medium Enterprises (SME) which are primarily based on services – intangible factors. The available literature in the area of services or intangible factors (Grant, 1999) (Arasa, 2009); such as human resource management in innovation and technological resources – are elements that clearly contribute to the success of service organization's competitiveness and success. In the wake of globalization, technological innovations in communication, and various global and local market shifts and corrections - which have taken place in the service organization - the value of service, quality, and satisfaction has gained prominence. Therefore, the knowledge gained from learning about the factors influencing performance in service proving institutions like the NHIF designated health care service providers can be beneficial for helping promote and improve the health status of all Kenyans, not only to be more effective, but also accessible and affordable – through a sustained healthcare financing.

According to Arasa (2009), the Fund focused on providing national contributory hospital insurance scheme for all residents in Kenya. The Act establishing the fund provided for the involvement of all Kenya residents of between 18 and 65 years, and mandated employers to deduct premium from wages and salaries of employees at a graduated scale. Later, the Fund addressed the issue of development of capacity to facilitate in the effective and efficient delivery on its mandate, through various policy documents. Some of the recent policy introductions include Customer Service Policy, Brand Network Policy, Corporate Social Responsibility Policy, Corporate Branding Policy, Customer Service Charter, Investment Policy, Debt and Credit Management Policy, Property Management Policy, Training Policy, Information and Communication Technology

Policy. All those developments were aimed at enhancing the NHIF's health care service providers' performance for tax payers.

NHIF designated health care service providers fall into the following three categories of services with respect to their amenability to productivity growth: The Stagnant Personal Services, The Progressive Impersonal Services, and The Asymptotically Stagnant Impersonal Services. The Stagnant Personal Services are those services that are by nature most resistant to productivity improvement efforts. Here, usually, an increase in output or reduction in input cannot be obtained unless quality is sacrificed. The example here is the services provided by a physician, as each patient seen by a doctor, is different. The quality of most services in this category is often judged by how much time the service provider spends with the patient (Haksever et al., 2006).

The Progressive Impersonal Services are those services that do not necessarily require the customer's involvement, capital can be substituted for labour in these services and some of them can be automated. The productivity increase in this service sector is phenomenal, e.g. technology started with modern advanced technological medical instruments and applications, including Magnetic Resonance Imaging (MRI) and the costs have declined steadily over the years.

Asymptotically Stagnant Impersonal Services are those services whose characteristic is a mixture of the first two categories: The most important aspect of a service in this category is that it exhibits an extraordinary growth in productivity as these services require two major inputs: the progressive and the stagnant components with the former being the expensive, at the outset, while the latter experiences little improvement in productivity, but becomes more and more expensive. The reasons can be explained in two ways: First, inflation which affects most goods and services, and second, input quantities of progressive component decreases, due to productivity growth the input quantities of the stagnant part do not change or decrease less; hence, the stagnant part

becomes relatively more expensive. Thus, stagnant services will become relatively more expensive, even if there is no inflation.

The productivity improvements in the progressive component may quickly become less significant in the overall cost picture because of the shrinking share in the total cost, and eventually, the stagnant component becomes dominant and the service takes on the characteristics of the category – decrease in cost in the early stages of its life cycle (Inman et al., 2009). The health care services provided by doctors in the designated hospitals for NHIF should be monitored as they are, by nature, most resistant to productivity improvement efforts. Here, usually, an increase in output or reduction in input cannot be obtained unless quality is sacrificed and this is important as a measure of NHIF's designated health care providers' service performance (Czinkota & Kotabe, 2009).

In the health care service providing hospitals there are progressive impersonal services that do not necessarily require the customer's involvement and where capital can be substituted for labour in the provision of these services, some of which can be automated. The productivity increases in this service sector is phenomenal due to the use of technology (Carrel et al., 2000). The costs decline steadily over the years, and should be monitored by the health care service providing hospitals to pass on the benefits to NHIF customers. This would help enhance the health care service providers' performance. Health care service providers, by the nature of the services they provide, exhibit asymptotically stagnant impersonal services which are services whose characteristics is a mixture of the stagnant personal services and progressive impersonal services. The important aspect of services in this category is that they exhibit extra ordinary growth in productivity requiring inputs from both the stagnant and the progressive components with the former being the expensive, at the outset, while the latter experiences, little improvement in productivity but becomes more and more expensive. (Gronroos, 2007) (Fitzsimmons & Fitzsimmons, 2008).

On behalf of NHIF and the Kenyan population the health care service providers should monitor closely the stagnant services with regards to their input and cost to help mitigate their performance. This is more so as the productivity improvement in the progressive component, through technology applications, in the health care service provision quickly become less significant in the overall cost picture because of the shrinking share in the total cost and eventually, the stagnant component – the cost of specialists/physicians – become dominant, thereby, making health care service providers' services taking on the characteristics of the stagnant category. This change can be beneficial to the ultimate customer/stakeholders in terms of a decrease in cost on the early stages of the service life cycle (Haksever et al., 2006) – hence improving the performance considerably.

#### **1.2 Statement of the Problem**

When Kenya attained its independence, its government committed itself to the provision of "free" health services, as part of its development strategy. The strategy required the institutionalization of health care service provision through the designated health care service providers which were to operationalize and implement the service. Since then, these institutions have not been scrutinized to find out their service provision performances in any way – no studies on their performance have been done at all. An Act of Parliament Cap 255, LOK, established the National Hospital Insurance Fund (NHIF) on 12<sup>th</sup> July, 1966, replacing the then Europeans, Asians and Arabs Hospital Fund which catered for the three communities only.

The introduction of performance contracting, by the Government of Kenya, through Gazette Notice created Performance Contracts Steering Committee in August, 2003, to spearhead the introduction and implementation of Performance Contracts in public service (Ndung'u, 2009). The technological and innovative advancement in all fields of human endeavour, including breakthroughs in global improvements in service delivery, made the immediate and future priority, therefore, becoming the realization of cost effectiveness and provision of quality and satisfactory services. In line with the above

developments the Fund embarked on operationalization of such concepts like – Results Based Performance Management (RBPM) the implementation of which should help improve the health care service provision performance and accountability to its members, the government and stakeholders. In a further effort to focus on transparency, accountability and improved service delivery, the Fund also developed Customer Service Charter. Measures were also put in place to help strengthen the internal capacity of the Fund. There are possible risks arising from lack of direct control in the designated health care service providers over quality; employee loyalty may be jeopardized by job loss fears; exposure to data security and customer privacy issues; dependence on suppliers which can compromise future negotiation leverage; coordination expense and delay – and atrophy of in-house capability to perform out sourced services.

This study focused on the determinants of service performance of NHIF designated health care service providers in Kenya, namely, Kenyatta National, Nairobi, Aga Khan, MP Shah, and Mbagathi hospitals. The current information available is on the contractual relationship between NHIF and the hospitals, at institutional level, but not the detail of the latter's determinants of internal service delivery to the ultimate mutual customer. There was lack of information on market research or understanding the customer, design gap or service design, conformance gap, communication gap or managing the evidence and consumer satisfaction gap, which had not been addressed by any objective studies. This study sought to fill the gap of lack of information. This is important because the Kenyan tax payers who contribute to NHIF which designated the health care service providers are entitled to know the value and level of the services they receive from the providers.

#### 1.3 The General Objectives of the study

The general objective of the study was to investigate the determinants of performance of the NHIF's designated health care service providers in Kenya.

#### 1.3.1 The specific objectives of the study were:-

- To determine the influence of Market Research on Service Performance of the NHIF designated health care service providers in Kenya.
- To assess the effect of Working Relations on Service Performance of the NHIF designated health care service providers in Kenya.
- To establish the influence of Communication on Service Performance of the NHIF designated health care service providers in Kenya.
- 4) To find out the influence of Harmonization on Service Performance by the NHIF designated health care service providers in Kenya

#### **1.4 Research Questions**

The study was guided by the following research questions:-

- 1) Does market research influence service performance of the NHIF designated health care service providers in Kenya?
- 2) Does working relations affect service performance of the NHIF designated health care service providers in Kenya?
- 3) Does communication influence service performance of the NHIF designated health care service providers?
- 4) Does harmonization have a role to play in service performance of the NHIF designated health care service providers in Kenya?

#### **1.5 Research Hypotheses**

These research questions may be re-written into hypotheses as follows:
$H_{01}$ : Market research does not have significant influence on service performance of the NHIF designated health care service providers in Kenya.

 $H_{02}$ : Working relations does not have significant influence on service performance of the NHIF designated health care service providers in Kenya.

 $H_{03}$ : Communication does not have significant influence on service performance of the NHIF designated health care service providers.

 $H_{04}$ : Harmonization does not have significant influence on service performance of the NHIF designated health care service providers in Kenya.

### **1.6 Significance of the study**

The global trends in technological innovations in all walks of life, especially in the service industry, the increased growth of population worldwide and in Kenya, specifically, the economic scarcity of resources and the general degradation of the total environmental scene; all require new approaches to management and strategic thinking. Vital service providing institutions like the designated health care service providing hospitals charged with important task of providing healthcare insurance in a developing economy like Kenya is faced with greater challenges than ever. The study developed this model to help highlight how it can aid, the better use of organization's mission, strategies, and policies to achieve the mandate or the provision of accessible, affordable, sustainable, and quality social health insurance for the majority of Kenyans. Further, the study aims to contribute valuable knowledge to researchers and practitioners looking for insights in service organization's performance as an area with very little prior research so far.

The single greatest challenge facing managers in the service industry is to raise the productivity and knowledge of service workers. It is a challenge which will ultimately determine the competitive performance of companies, and more importantly it will

determine the very fabric of society and the quality of life in every nation (Drucker, 2007). It is generally accepted that raising productivity in general, and service productivity in particular, is indeed one of the most important issues public policy makers and managers face. The study has highlighted the importance of productivity, especially, service productivity and measurement of performance in service organizations like health care service providing hospitals in Kenya. Health care provision in a nation and productivity in a nation go hand in hand. Increased share of services like health care would not slow down economic productivity (Inman, ed. 2009), due to the fact that health care service is not stagnant in productivity growth. With their costs rising rapidly, service firms are under pressure to increase service productivity; the efforts by the NHIF designated health care service providers toward harnessing the productivity of services through technology can have a positive effect on service performance.

#### **1.7 Scope of the Study**

The research specifically focused on the determination of service performance of designated health care service providing hospitals in Kenya. The study was limited to the five hospitals: Kenyatta National Hospital, Nairobi Hospital, Aga Khan, MP Shah and Mbagathi hospitals - all are NHIF designated health care service providers, which enhanced the collection of representative data on performance of the designated health care service providers in Kenya. The research targeted a total of 375 respondents from the five designated health care service providers. There are many factors that affect service performance and quality, such as, the environment, regulatory constraints and others, but the research chose the five principal dimensions customers use to judge service quality and performance, through reliability, responsiveness, assurance, empathy, and tangibles.

## **1.8 Limitations of the Study**

The idea of the determinants of performance of NHIF is a topic to be admired. This study explored the opinions of hospital managers regarding typical activities with model implications within their firms. Therefore, the effect of the small size of the sample might be a decreased generalizability of the findings. However, this was mitigated against by carrying out the bootstrapping procedure. The study used ordinal scale among others to measure the variables. However, ordinal scale does not give the investigator the level of precision required in a study, especially when strong statistical procedures are to be applied (Mugenda, 2008). Also, because the respondent is the sole data source for both independent and dependent variables, common method variance could introduce spurious correlation between the variables (Avolio, Yammarino & Bass, 1991; Jap & Anderson, 2004). However, a test of common method variance resulted in a value that was within the acceptable thresholds, thus mitigating against the limitation.

## **CHAPTER TWO**

#### LITERATURE REVIEW

## **2.1 Introduction**

This chapter covers the performance concept, National hospital fund concept, theoretical and empirical literature that is relevant to the area of study. A conceptual framework is also developed. This is followed by critique of the existing literature, research gaps and summary of the empirical literature.

#### **2.2 Theoretical Framework**

A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems (Gronroos, 2007). A service is intangible and perishable. It is an occurrence or process that is created and used simultaneously or nearly simultaneously (Zeithaml & Bitner, 2007). While the consumer cannot retain the actual service after it is produced, the effect of the service can be retained (Sasser et.al., 1978).

Most authorities consider the services sector to include all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort or health) that are essentially intangible concerns of its first purchaser (Quinn et al., 1987). In the late 1950s and early 1960s, US society benefited from great surge in demand for goods, a major expansion of production practices, and an increase in competition, far exceeding the economic welfare levels of other nations (Czinkota & Kotabe, 2009). As a result, the United States became the cradle of marketing thinking. This area encouraged the development of marketing in its modern

form, based on a customer focus that made extensive use of market research to investigate customers' needs and wants, and it emerged on the scale that we now witness. The discipline further matured in the 1970s as the ideas that had developed from practical experience were codified and substantiated with quantitative research. Marketing thus became routinized as an increasingly important function of business. The leading edge of marketing moved on, at least in part, to the service industries – particularly, to retailing and financial services and to non-profit institutions and activities – which were experiencing massive changes. The tool for listening to customers is marketing research. Before firms can offer new or improved products and services, they must understand what customers need, how they think, and what their questions are (Czinkota & Kotabe, 2009).

#### 2.2.1 Service Relationship and Interactive Management Theory

Interactive actions between management/service personnel and customers and effective communication between service personnel and management are closely related, as both require similar management skills. Performing management functions and achieving competitive advantage are the cornerstones of a manager's job. However, understanding this does not ensure success. Managers need a variety of skills to do these things well (Bateman & Snell, 2010).

Three general categories: technical skills, interpersonal and communication skills and conceptual and decision skills are pertinent. Technical skills is the ability to perform a specialized task that involves a certain method or process, conceptual and decision skills involve the manager's ability to identify problems and resolve problems for the benefit of the organization and everyone concerned. Managers use these skills when they consider the overall objectives and strategy of the firm, the interactions among different parts of the organization and the role of the business in its external environment. Managers, thus, confront issues that involve all aspects of the organization requiring consideration of a larger and more interrelated set of decision factors.

Interpersonal and communication skills influence the manager's ability to work well with people – they are often called people skills. Managers spend the great majority of their time interacting with people in this case – managers, service personnel, customers and the whole organization.

They must develop their abilities to lead, motivate, and communicate effectively with those around them. In many organizations the reason a manager fails is not because he lacks technical skills, but because he does not have the "people skills". This can help alleviate the difficulty in service prototyping – the need to evaluate the service delivery system in operation like National Hospital Insurance Fund (NHIF), through its health care service providers, where technology, service providers, and customers are integrated (Fitzsimmons & Fitzsimmons, 2008).

Value in service supply relationship management arises from three sources: Bidirectional optimization, management of productive capacity, and management of perishability (Fitzsimmons & Fitzsimmons, 2008). Bidirectional optimization implies the possibility of doing what is best from the customer's perspective, while doing the best for the service enterprise, a simultaneous optimization of both supply and demand for the service. Management of productive capacity improves and creates an opportunity to increase greatly the productive capacity of the work force, by better management of the service chain, resulting in more cumulative time for workers to be with customers. Management of perishability is the approach used in service chain management to minimize the negative impact of idle time on the productive capacity of the distributed service workforce. The productive capacity of a service worker is limited to the time he or she is at the customer site with the right tools and knowledge of the customer's requirements and preference. Managing perishability also involves the process of training, refining, and extending skills and capabilities of workers (Fitzsimmons & Fitzsimmons, 2008). This theory is relevant to the study in that it supports the dependent variable of the study.

#### 2.2.2 Classification of Business Services Theory

Business services are often classified according to degree of tangibility which describes the extent to which the service has physically measurable output properties. Some services are highly tangible and well defined and measurable in output. Other services have output that is significantly less measureable and more difficult to define (Fitzsimmons & Fitzsimmons, 2008). The degree of tangibility, although fails to provide the purchaser with sufficient information to assist in the service purchase decision, provides measurability. Therefore, the focus of the business service (property (physical evidence), people, and process) is used as the principal dimension for the taxonomy. The degree of service tangibility will be an attribute to be considered when purchasing service in each of these categories (Czinkota & Kotabe, 2009). In general, however, service tangibility will decrease as focus of the service moves from property to people to process – which forms part of the focus of this study.

The other dimension representing the criticality or importance of the service to buying organization must be considered in the purchase decision. The service importance to the core business is judged by its relationship to the core business (Czinkota & Kotabe, 2009). Service important to the core business of an organization will attract higher level management involvement because the fit with corporate goals is critical and involves substantial exposure to risk if failure occurs. This is obvious for a sensitive area, such as, the provision of health care service of the designated health care service providers for National Hospital Insurance Fund (NHIF). Thus, a firm or an organization like NHIF in Kenya might also modify the classification of services, according to their importance to itself and the client, firms or organizations, like hospitals providing the health care services, for eventual satisfaction of the healthcare consumers. This is illustrated by the Taxonomy for Purchasing Business Service which shows the grouping by the category of business service focus as shown in Table 2.1.

Focus Of Service	Low	High		
_				
Property	Facility Support	Equipment Support		
(Physical	- Laundry	- Repairs		
Evidence	- Janitorial	- Maintenance		
	- Waste Disposal	- Product Testing		
People	Employment Support	Employee		
Development				
	- Food Service	- Training		
	- Plant Security	- Education		
	- Temporary Personnel	- Medical Care		
Process	Facilitator	Professional		
	- Bookkeeping	- Advertising		
	- Travel Booking	- Public Relations		
	- Call Centre	- Legal		

# Table 2.1: Taxonomy for Purchasing Business Services

The lesson from a look at the Taxonomy for Purchasing Business Services Table 2.1 for Outsourcing Considerations is that uncertainty arises from the sources of supplier delivery performance and customer demand. The customer-supplier duality for services creates a network of relationships, rather than a chain as found in manufacturing, that depicts a physical object passed from one entity to another. All services act on something provided by the customer, implying that customers are also acting as suppliers in the service exchange – the customer-supplier duality, as illustrated by Figure 2.1 bidirectional relationships between the service delivery firm, its supplier and the customer, as in the case of National Hospital Insurance Fund and the designated health care service providers in Kenya.



**Figure 2.1: Service Supply Bidirectional Relationships** 

Effective communication between service personnel and management (service design, service provider, service supplier, and customer) enhances the customer-supplier duality and resulting bidirectional relationship which are central to understanding the nature of service relationships. According to Fitzsimmons and Fitzsimmons (2008), there exists a gap in the available literature on managerial implications of bidirectional relationships in three dimensions: 1) Service supply relationships are hubs, not chains, 2) Service capacity is analogous to inventory, 3) Customer supplied inputs can vary in quality.

In the first dimension for the most common supply relationship the concept of simultaneous production and consumption applies because, service supply relationship, extending beyond two levels, are quite rare. In fact, the service supply relationship is more like a hub than a chain due to the fact that the service provider acts as the agent for the customer, when dealing with outside suppliers. Thus, hubs can be more desirable than chains due to the fact that there are fewer opportunities for delays and information can be more easily shared.

There is need for the designated health care service providers to foster partnering or sole sourcing with their suppliers to help enhance financial and process efficiencies for improved performance. The second dimension addresses the element of random occurrences with regards to customer supplied inputs in services with immediate expectations of immediate processing. The problem is exacerbated by the fact that services cannot be inventoried, thus excess capacity must be held in reserve to accommodate unscheduled expectations. The use of reservation systems are encouraged to help match capacity – for performance improvement.

The third dimension, where customers-supplied inputs can vary in quality, is demonstrated by the fact that customer inputs can be incomplete as a consequence of lack of consistency in the quality of customer-supplied inputs. This represents a serious challenge for the service provider to deliver on promises to customers, when inputs are questionable. The situation puts a heavy premium on the designated health care service providers on effective communication to explicitly communicating value-adding expectations with customers prior to and in the process of service to avoid misunderstandings with regards to quality of service – to help enhance their performance.

## **2.3 Conceptual Framework**

This study focused on the shift in marketing thought from the focus on the customer to the firm's external environment in a context which includes the competition, government policy and regulation, and the broader economic, social, and political macro forces that share the evolution of markets (Keegan, 2008). The study therefore, built on market research, through working relations as part of organizational behaviour and communication which promotes organization wide Harmonization of tasks or harmony of roles, internally and externally – which enhance performance.

The relationships from a system's point of view, between the effect of market research and working relations in the organization, with both communication and harmonization of tasks and roles positively influence service performance.

Working relations in the organization between service personnel and management can help bring about harmonization, resulting in better service performance. Market research, together with working relations in the organization, encourages Harmonization of tasks and harmonization of roles and service personnel, hence resulting in better service performance.

Communication between all cadres of personnel can greatly influence and improve service performance. When there is high Harmonization of tasks and harmonization of roles in the organization, it can lead to higher service performance. The above relationships are presented in Figure 2.2 which shows market research, working relations, communication and alignment of tasks or harmonization of roles, as independent variables on service performance to connect management perception and customer expectation, regarding the expected service specifications and performance.



Independent Variables

Dependent Variable

**Figure 2.2: Conceptual Framework** 

## **2.4 Service Performance**

The management of an open system requires techniques and sensitivities different from those of a closed system. Services managers are faced with non-routine operations in which only indirect control is possible. In services it is the human element that is central for effective operations and effective performance (Fitzsimmons & Fitzsimmons, 2008). The interaction with the customer cannot be fully controlled. For service performance not to suffer, attitude, appearance, and the presence of the customer during the process must be fully considered. The unique characteristics of intangibility, perishability, and simultaneous provision and consumption introduce special challenges for service management and performance.

A comprehensive view of the service system is necessary to identify the possible measures of service performance. In health care service delivery like the case of the designated health care service providers in Kenya, performance can be viewed from five perspectives: content, process, structure, outcome, and impact (Czinkota & Kotabe, 2009). For health care the scope of service performance obviously extends beyond the quality of care provided to the patient, but it also includes the impact on the family, community, and the nation. Customer satisfaction with a service can be defined by comparing perceptions of service received with expectations of service desired. When expectations are exceeded, service performance is perceived to be of exceptional quality. When the opposite is true, service performance is deemed unacceptable. The expectations are based on several sources, including word of mouth, personal needs, and past experiences. Research studies have identified five principal dimensions that customers use to judge service performance - reliability, responsiveness, assurance, empathy, and tangibles - listed in relative importance to customers (Fitzsimmons & Fitzsimmons, 2008). Measuring the gap between expected service and perceived service should be a routine customer feedback process practiced by the designated health care service providers in Kenya. Customer satisfaction and the service performance are dependent on minimizing the gaps that are associated with the performance in the delivery of the service to create value.

## 2.4.2 Market Research Theory

In the 1950s and early 1960s, due to a great surge in demand for goods, a major expansion of production capabilities, and an increase in competition, far exceeding the economic welfare levels in some nations like the United State of America, resulted in marketing thinking (Drucker, 2007). A key change in modern marketing is the development of extensive use of market research to investigate customers' needs and wants (Narayanan, 2009). New technological innovations require the need to view both suppliers and customers as part of the marketing system (Czinkota & Kotabe, 2009). Marketing has also been transformed by the arrival of the information revolution which is restructuring the performance of marketing tasks. Today, firms can use many people who register, via internet, to gather, track, cross-reference, manipulate, analyze, and disseminate information.

#### 2.4.3 The Relationship from a System's Point of View

The relationship from a system's point of view, between the impact of interactive actions in the organization and market research are mediated by both communication and alignment of tasks or harmonization of roles to positively influence service performance. The rise of relationship integration (Fawcett et al., 2008) in the 1980's, economic globalization, and the arrival of hugely successful Japanese companies had pressured many organizations around the world to cut costs. This trend did not leave out institutions like the health care service providers in Kenya which need to do environmental scanning for the acquisition and use of information about events, trends, and relationships in an organization's internal and external environments. Such observations can be incorporated into a proactive search for information that can help the health care service providers to gain unique insight into changes that can improve

performance. The aim of customer relationship management (CRM) is to produce high customer equity, which is the total of the discounted lifetime values of all of the firm's customers (Zeithaml & Bitner, 2007). This requires interactive working relations in the organization, market research, mediated by communication, alignment of tasks and harmonization of roles to positively influence service performance in the designated health care service providers in Kenya. This approach will also address the issues of value equity, brand equity, and relationship equity in the health care service providing hospitals for the better service performance.

## 2.4.4 Working Relations in the Organization

Interactive actions in the organization between service personnel and management can help bring about alignment of tasks or harmonization of roles, resulting in better service performance by the designated health care service providers. Gaps in service performance are a measure of the gap between expected service and perceived service. Heterogeneity in service provision means the combination of the intangible nature of services and the customer as a participant in the service delivery system results in variation of services from customer to customer (Fitzsimmons & Fitzsimmons, 2006). The interaction between customer and employee in services, however, creates the possibility of a more complete human work experience, because, in services work activity is generally oriented towards people rather than towards things, except in communication services. Personal attention creates opportunities for variability in the service that is provided which, however, is not bad unless the customer perceives significant variation in quality. The direct customer-employee contact has implications for service and/or industrial relations, as well (Haksever et al., 2006). A disgruntled service employee can do irreparable harm to the organization, such as, a health care service provider where the employee is often the sole contact with the customer. Therefore, what the management of these hospitals must be concerned about is the employees' attitudes, as well as, their performance (Czinkota & Kotabe, 2009). Through training and genuine concern for employees' welfare, the goals of both the health care service providers and, by extension, the goals or performance of NHIF can be internalized.

## 2.4.5 Market Research and Communication

Market researchand communication about tasks and harmonization of roles by management personnel and service, can result in better service performance (Laudon & Laudon, 2010). Customer satisfaction is dependent on minimizing the four gaps that are associated with delivery of the service (Fitzsimmons & Fitzsimmons, 2008), because the gap number five (5), customer satisfaction, which is the gap between customer expectations and perceptions (Zeithaml & Bitner, 2007), is dependent on minimized previous four gaps as shown in Figure 2.3.



Figure 2.3: Service Performance Gap Model (Adapted from Fitzsimmons & Fitzsimmons, 2008)

The market research gap is the discrepancy between customer expectations and management's lack of full understanding about how customers formulate their expectations on the basis of sources, advertising, past experience with the firm and its competitors, personal needs and communication with friends. Strategies for closing this gap include improving market research, fostering better communications between management and its contact employees, and reducing the number of levels of management that distance the customer. The design gap results from management's inability to formulate target levels of service quality to meet perceptions of customer expectations and translate them into workable specifications. Gap 2 may result from a lack of management commitment to service performance and quality or a perception of the unfeasibility of meeting customers' expectations. However, setting goals and standardizing service delivery tasks can close this gap.

## **2.4.6** Communication

Communication between all cadres of personnel as an intervening variable can greatly influence and improve service performance. The important characteristics of services, such as intangibility, perishability, inseparability, and variability, all imply customer contact involvement of customers in service production and high personal judgement required of service providers (Haksever et al., 2006). These characteristics which exist in the operations of the designated health care service providers make service encounters special events in which operations, marketing and human resource functions of an organization are all involved and necessitates cooperation and coordination among all the functions to create value and customer satisfaction (Czinkota & Kotabe, 2009). This requires communication between all cadres of personnel in the designated health care service providers, as an intervening variable which can greatly influence and improve service performance (Drucker, 2005).

## 2.4.7 Harmonization

When there is a high alignment of tasks and harmonization of roles in the organization that can lead to higher service performance. The strategic intent of NHIF of providing health care services to its clients by outsourcing the services to the designated health care service providers has the challenge inherent in a service supply chain organizations which poses the question: Does strategic intent translate into operational performance? (Fawcett et al., 2008). Across industries and channel positions, managers have discovered that delivering customer value profitably requires more than greater efficiency (Stoner et al., 2003). It is in the interest of NHIF that the strategic intent of alignment and harmonization goal, customer satisfaction, process integration, total costs, and intra-organizational collaboration is measurable in the health care service providers to help the hospitals improve their performance (Fawcett et al., 2008).

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

According to Fitzsimmons and Fitzsimmons (2006), international service organizations evaluate the gap between the customers' expectation and the actual service experience. The questionnaire mailed to customers is to assess the quality of their experience. The gap between customer expectations and the perception is defined as customer satisfaction gap. It refers to the concept of understanding the customer. The market research gap is the discrepancy between customer expectations and management perceptions of these expectations. The gap arises from management's lack of full understanding about how customers or clients formulate their expectations on the basis of a number of sources: advertising, past experience with the firm and its competitors, personal needs, dual communication with friends.

The designated health care service providers used to compile medical claims and submit them to the Fund for reimbursement, without much scrutiny. The contributors or beneficiaries could also launch a direct claim for reimbursement. There were many reported cases of fraudulent claims in the 1990's (Arasa, 2009) which made NHIF lose millions of shillings, until an intensive crackdown was launched in 1995, which closed down several hospitals. The Ministry of Health, acting through the agency of Medical Practitioners and Dentists Board was to approve the hospitals before these institutions could be designated, but there was no research to find out their capability and expertise. In the service sector, there is a continuing need to develop the offerings that are made to customers or clients, even though there is normally much less new product development activity (Czinkota & Kotabe, 2009).

#### 2.6 Research Gap

No research has been carried out on the determinants of the designated health care service providers' performance. At its inception, NHIF had thirty hospitals accredited to it. The hospitals were government owned and were where people could get medical care. Over the years, the numbers of accredited and designated hospitals have greatly expanded. Currently, NHIF has over 400 designated health care service providers which are located throughout the country. They are categorized into four groups, generally – Government, Mission, Private, and Community health care service providers. The designated health care service providers offer credit services to members of NHIF, upon which reimbursements are made based on the respective hospital daily rates (Arasa, 2009). The designated health care service providers used to compile medical claims and submit them to the Fund for reimbursement, without much scrutiny. The contributors or beneficiaries could also launch a direct claim for reimbursement. There were many reported cases of fraudulent claims in the 1990's (Arasa, 2009) which made NHIF lose millions of shillings, until an intensive crackdown was launched in 1995, which closed down several hospitals. The Ministry of Health, acting through the agency of Medical Practitioners and Dentists Board was to approve the hospitals before these institutions could be designated, but there was no research to find out their capability and expertise. In the service sector, there is a continuing need to develop the offerings that are made to customers or clients, even though there is normally much less new product development activity (Czinkota & Kotabe, 2009). According to Fitzsimmons and Fitzsimmons (2006), international service organizations evaluate the gap between the customers' expectation and the actual service experience. The questionnaire mailed to customers is to assess the quality of their experience. The gap between customer expectations and the perception is defined as customer satisfaction gap. It refers to the concept of understanding the customer. The market research gap is the discrepancy between customer expectations and management perceptions of these expectations. The gap arises from management's lack of full understanding about how customers or clients formulate their expectations on the basis of a number of sources: advertising, past experience with the firm and its competitors, personal needs, dual communication with friends.

A research gap exists due to the fact that there has been no research conducted by the designated health care service providers in Kenya which could show the relationships between customer expectations/management perceptions of customer expectations, service standards, service delivery, and customer perceptions. This study therefore, sought to bridge the gaps of lack of information on the factors that determine the performance of the designated health care providers in Kenya – namely, market research, design, conformance, communication, and customer satisfaction. All the literature available from the National Hospital Insurance Fund (NHIF) which designated the health care service providers to provide health care has not carried out any research on the latter's performance. It is this reason that formed the core purpose of the study.

# 2.7 Summary of the Literature Review

This chapter has covered the theoretical framework, conceptual framework, empirical review and the literature gaps. The theoretical framework has provided a theoretical understanding of the research by reviewing theories related to the study. Empirical studies have also shown that despite the availability of numerous methods and publications on how organizations can manage service delivery, the hospitals still face serious challenges in managing service delivery. This study reviewed this in details since not much has been done in this area.

## **CHAPTER THREE**

#### **RESEARCH METHODOLOGY**

## **3.1 Introduction**

This chapter discusses the methodology of this research. It is made up of eight sections dealing with introduction, research design, population, sample techniques, data collection, and measurement of variable. It also contains how data will be analyzed, interpreted and presented.

## **3.2 Research Design**

The research adopted the descriptive method, giving details of current performance management procedures and practices, as administered in the five organizations. According to Saunders *et al.* (2002), the objective of a descriptive research is to portray an accurate profile of a person, events or situation. According to Berenson and Levine (1983), descriptive statistics are those methods involving collection, presentation, and characterization of a set of data in order to properly describe the various features of that set of data – and inferential statistics which are those methods that make possible the estimation of characteristics of population or making of a decision, concerning a population based, upon sample results. Thus, the study adopted two types of research approaches where data yielded both quantitative and qualitative results. The qualitative approach intended to gain informed insight, a better understanding of a phenomenon, using data-gathering techniques, and observation.

To answer the questions posed under Research Questions 1.4, a survey research method was used to obtain information from the designated health care service providing hospitals' employees. The study portrayed the current market research and working relations as independent variables on the hospitals' performance management programmes. The result of the descriptive method and consequent data generated made

it possible to propose different scenarios and possible recommendations on how to improve the existing service performance provided by the designated health care service providing hospitals.

#### **3.3. Research Philosophy**

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analyzed and used. The basic belief system or world view that guides this investigation is a paradigm. The underlying research philosophy guiding this study is the positivism paradigm as it is regarded as a research strategy and approach that is rooted on the ontological principle (Aliyu, Bello, Kasim & Martin, 2014).Positivism manages to bring some prior expectations to the data analysis. On the other hand, it is also in agreement with interpretive research that permits explanation derived from emerging data. Through positivism, the research process is designed to reveal pre-existing phenomena and the relationships between them. In positivist approach, the phenomena under investigation are relatively stable, exist objectively and represent factual account of the case (Taylor, 2014). The selection of positivism in this study is based on the examination of cause and effect relationships between objects of study, which is important in answering certain research questions (Urus, 2013).

# **3.4 Target Population**

A population (or universe) is the totality of items or things under consideration, a sample is the portion of the population that has been selected for analysis (Berenson & Levine, 2014). Population sometimes known as the "universe" is the total collection of elements – consumers (Weirs, 1984).The unit of analysis may be a person, group, organization, country, object, or any other entity that you wish to draw scientific inferences about. It is a group of individuals, objects or items from which samples are taken for measurement (Kombo &Tromp, 2006). It is a complete set of individuals, cases or objects with some

common observable characteristics (Mugenda & Mugenda, 2008). They are the larger groups from which a sample is taken.

For this study, it was the members of staff of the five hospitals in management, administration and wards the hospital include:-Kenyatta National Hospital, Nairobi Hospital, Aga Khan, MP Shah, and Mbagathi hospitals. According to Mugenda and Mugenda (2008), a target population is the absolute population to which the researcher would like to generalize the results. The target population for the five hospitals were one hundred and fifteen (115) members of staff; 30 managers, 35 administration staff, and 40 ward staff.

Table 3.1: Distribution o	f target population
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Hospitals	Admin staff	managers	ward staff	Total	
Kenyatta National Hospital	215	125	315	655	
Aga Khan	120	195	230	630	
MP Shah	75	80	80	305	
Mbagathi hospitals	40	50	60	150	
Nairobi Hospital	90	125	100	315	
	540	575	785	1900	

Source: MOH of Kenya 2016

## **3.5 Sampling Frame**

A sample frame is a list of all the items where a representative sample is drawn for the purpose of the study (Nachmias & Nachmias, 2008). The sampling frame for this study was all of the 1900 employees in the five hospitals. The hospitals are Kenyatta National Hospital, Aga Khan, MP Shah, Mbagathi Hospital and Nairobi Hospital.

## 3.6 Sample and Sampling Technique

Sampling was useful due to the large population dealt with and to mitigate the high cost and time to obtain the information, which enhances quick decision making. It was relatively easier to manage smaller samples and still exercise quality control through questionnaires to achieve quality responses in the process (Aaker *et al.*, 2009). From the target population suggested above, under population, a representative sample was selected. The researcher used purposive sampling method which, according to Kothari (2008), involves purposive and deliberate selection of particular units of the universe for constituting a sample which represents the universe concerned. This was true of this study, where each of the health care service providing hospitals had many departments. Questionnaires was distributed to 1900 employees - 575 in management, 540 in administration and 785 in the wards departments of each hospital.

Gall et al. (1999) reckon that researchers attempt to discover something about large group of individuals by studying a smaller group. The larger group that they wish to learn about is called a population while the smaller group is the sample. Wisker (2001) defines a sample as a selected and chosen group upon which you carry out your research. A sample is a subset of the population. It comprises of some members selected from it. By studying the sample, the researcher should be able to draw conclusions that would be generalized to the population of interest (Sekaran, 2003). He further explains that sampling is the process of selecting a sufficient number of elements from the population, so that a study of the sample and an understanding of its properties or characteristics would make it possible for us to generalize such properties or characteristics to the population elements.

A sample size 115 respondents was used in the study. Out of these, 35 were drawn from top administrators 40 from middle level management and 40 from ward staff. This was arrived at by using the formula below as espoused by Mugenda & Mugenda (2008).

$$n=z^2 pq/d^2 = (1.96)^2 (0.5) (0.5) / (0.01)^2 = 384.$$

However this is only applicable when the population size is at least 10,000. When the population is less than 10,000 as was the case with this study, then the sample size was subjected to the formula:

$$nf = n/1 + (n-1)/N$$

Hospitals	ADS	Μ	W.S	Total	AS	Μ	W.S	Total
Kenyatta National Hospital	215	125	315	655	13	8	19	40
Aga Khan	120	195	230	545	7	12	12	31
MP Shah	75	80	80	235	5	5	3	13
Mbagathi hospitals	40	50	60	150	5	7	2	14
Nairobi Hospital	90	125	100	315	5	8	4	17
Total	540	575	785	1900	35	40	40	115

## Table 3.2: Sample size and sample frame distribution

#### **3.7 Pilot Testing**

A pilot study was conducted in the five hospitals in Nairobi County. The purpose of pilot testing was to establish the accuracy and appropriateness of the research design and instrumentation and therefore enhance validity. A pilot test assists the researcher in determining if there are flaws, limitations, or other weaknesses within the research instruments or research design to allow for revisions prior to the implementation of the study. A pilot test is conducted with participants that have similar interests as those that will participate in the study. It also assists the researcher with the refinement of research questions (Kvale, 2007). To carry out this test, the researcher took small samples of equal size from each of the proposed strata (Kothari, 2004).

## 3.7.1 Reliability of Instrument

Mugenda and Mugenda (2008) defined reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. An instrument is reliable when it can measure a variable accurately and obtain the same results over a period of time. However, reliability in research is affected by random errors, the pre-test helped the researcher identify the most likely source of errors and hence respond to them before the actual study.

The instrument administered the pilot sample of 10 respondents of the selected five hospitals which sample enjoys the same characteristics as the study sample. The pilot sample did not participate in the final survey. Reliability of the instruments is then estimated from the collected data. Test re-test method was used to pilot the questionnaires, which do not form sample of the final study. This test re-test method involves administering the same scale or measure to the same group of respondents at two separate times after a certain time interval has elapsed. The two set of scores will be correlated to establish the reliability of the instruments. This was done by calculating the Cronbach co-coefficient between the scores.

$$KR_{20} = \frac{(K)(S^2 - \sum S^2)}{(S^2)(K-1)}$$

Where

KR<sub>20</sub> is reliability coefficient of internal consistency

K number of items used to measure the concept

 $S^2$  Variance of all scores

s<sup>2</sup>variance of individual items

A cronchbach alpha coefficient of 0.7 and above was considered high enough to judge the instrument as reliable. A high cronchbach alpha coefficient implied that the items correlated highly among themselves i.e. there was consistency among the items in measuring the concept of interest (Mugenda & Mugenda, 2003).

## 3.7.2 Validity of Instrument

The validity of an instrument is the extent to which it does measure what it is supposed to measure. Mugenda and Mugenda (2008) stated that validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the variables of the study. Mbwesa (2006) stated that validity of research instrument refers to the extent to which a test or instrument measures what it was intended or supposed to measure. Ranjit and Kumar (2005) further define validity as the quality of measurement procedure that provides respectability and accuracy.

The research instrument will be validated in terms of content validity. The content related technique measures the degree to which the questions reflect the specific areas covered. In this study the questionnaire, interview schedule and documentary analysis will be submitted to the supervisors who are experts in the field to ascertain the validity. Any questions not correctly phrased will be corrected to ensure content validity. The researcher will conduct a pilot interview in all the selected five hospitals. The questions that may be found to be inadequate will be corrected before conducting the field study. In addition, the researcher will conduct factor loading analysis to determine validity. A factor loading analysis greater than or equal to 0.5 will be considered appropriate for purposes of determining validity. This comes as a result of the formula used above in finding the sample size (Mugenda & Mugenda, 2008).

## 3.8 Data Collection

The data for this study was collected using structured, direct survey questionnaire that captures the various variables which was administered to at least two managers from every selected institution, as control for any personal bias. New developments in the collection and analysis of data had increased the ability to manage multisite service operations. Information collected on the performance of multisite units could be used to identify the most efficient producers and productivity is enhanced system wide, when the sources of these successes are shared with other sites (Fitzsimmons & Fitzsimmons, 2008).

Questionnaires with both close ended and open ended questions were administered to the respondents as data collection instruments. The questionnaire was divided into sections: Part A identified the names of the hospital involved, by name, address, and core business, participant's identity, job title, and experience. Part B asked the respondents to provide information concerning the study's core questions. Part C asked questions on performance. Part D and E dealt with questions on intervening variable while Part F asked questions on performance measurement. The researcher in this case used self-administered questionnaires sent to respondents. The questionnaires consisted of, both open-ended and close-ended questions, but more close-ended questions were needed for ease of analysis of the results, while knowing that the open-ended questions could help in gathering, as much information as possible, from respondents on the subject under study.

## **3.9 Data Collection Procedure**

The researcher applied for and was granted by the respective hospitals a research permit before embarking on the study. The researcher then administered research instruments to the respondents. The researcher made sure that the tests are conducted correctly and observations made systematically. In some cases, data was coded, for example males coded as 1 and female as 2. The study used electronic spreadsheet to keep the data for the study. This included both raw data and coded data. In most cases, the study used spreadsheet to perform some statistical calculations (e.g. MS Excel helped in analysis of correlation coefficient, analysis of variance, z-test). The researcher used a standardized

instrument to collect the data, administered a self-developed instrument and recorded naturally available data (Kombo & Tromp, 2006).

## 3.10 Operationalization of Variables

#### 3.10.1 Market Research:

If strategies set the general goal and course of action for organizations and their performance, operational plans have to provide the details needed to incorporate strategic plan into the organization's day-to-day operations (Stoner et al., 2003). The important characteristics of services include intangibility, perishability, inseparability, variability, and ownership - all involve customer contact, involvement of customers in service production, and a high personal judgement required of service providers. These characteristics make service encounters special events in which operations, marketing, and human resources functions of an organization, like the designated health care providers, must be interested. At the same time, these characteristics necessitate cooperation and coordination among the three functions to create value and customer satisfaction (Haksever et al., 2006). It is operations that put together the service system and processes and delivers the actual service to customers – requiring the input and support of marketing research.

#### **3.10.2 Working Relations**

The service profit chain proposes a relationship that links profitability, customer loyalty, and service value to employee satisfaction, capability, and productivity. Profitability and revenue growth are derived from loyal customers and loyal customers, in turn, result from satisfaction that is influenced by the perceived value of the service (Fitzsimmons & Fitzsimmons, 2008). Satisfied, committed, capable, and productive employees create service value. But, satisfied and loyal employees begin with selection and training, requiring investment in information technology and other work place support that allow decision making latitude to serve customers. The designated health care service

providers in Kenya must come up with an internal operating strategy and service delivery system and concept that externally target customers with satisfaction and loyalty - hence, achieving revenue growth and profitability. The service encounter is viewed as a triad with the customer and contact personnel, both exercising control over the service process in an environment defined by the service organization. The importance of flexibility in meeting customer needs transcends the individual in the organization requiring better and highly enhanced working relations. The service supply relationships are hubs, not chains.

## **3.10.3** Communication

Service strategy must begin with a vision of the place and purpose of the enterprise both of which must be communicated to the target market. Thus, a strategic service vision must be formulated by addressing questions about the target market, service concept, operating strategy, and the delivery system (Czinkota & Kotabe, 2009). How can service managers design their operations to achieve the efficiencies of manufacturing when customers participate in the process? This can only be achieved when service delivery systems are separated into high-and-low-contact customer operations (Fitzsimmons & Fitzsimmons, 2008). This separation of activities can result in customer perception of personalized service while, in fact, achieving economies of scale through volume processing, the process of which requires increased communication in the amount of customer contact in the creation and delivery of the service; while isolating the technical core of the low contact operations. When service systems are separated into high-and-low-contact operations, each area can be designed separately to achieve improved performance. However, there is need for communication across the lines of visibility. Organizational communication is essential downward, upward, horizontal, and informal communication in organizations is also essential for good managers and leaders (Bateman & Snell, 2010).

## **3.10.4 Alignment or Harmonization**

Some service institutions fall into the category of "available for service" because they view operations as a necessary evil to be performed at minimum cost (Hacksever et al., 2006). The health care service providers in Kenya tend to behave like the category of available for service. There is little motivation to seek improvements in quality because the customers often have no alternatives. Workers require direct supervision because of their limited skills and the potential for poor performance that results from minimal investment in training. Investment in new technology is avoided until it is necessary for survival. For better alignment or harmonization of services, the health care service providers need managers with a vision of what creates value for the customer and who understand the role and tasks that operations managers must play in the delivery of the service (Fitzsimmons & Fitzsimmons, 2008). It is through alignment or harmonization of roles and tasks that the health care service providers can achieve the quality, as perceived by the customer through, content, process, structure, outcome, and impact (Czinkota & Kotabe, 2009).

#### **3.11 Data Analysis and Presentation**

For the purpose of this study, the researcher analyzed and presented data, using descriptive and inferential statistical tools. Data was processed using Statistical Package for Social Scientists (S.P.S.S.). The resultant information was presented by tables and charts. Data analysis was descriptive and inferential. Descriptive statistics can be helpful to the researcher in process of summarizing and data organization, bringing meaning to data (Mugenda & Mugenda, 2003). To help the researcher in determining the relationship existing between the variables that determine performance inferential statistics or the statistical methods that make possible the estimation of a characteristic of a population or the making of a decision concerning a population based only upon sample results will be appropriate. The Likert's scale (most widely used attitude scaling techniques), sometimes referred to as the summated scale, was used in asking the

respondents their degree of agreement or disagreement in a scale of one (1) to five (5), where 1 and 2 was regarded as scores of average negativity, while 3 was a score of neutrality or representing uncertainty response. Score 4 and 5 represented scores of positivity. The Likert scale made it possible to distribute the scores meaningfully by the researcher and brought out the divergent aspect of the study. The data was analyzed using the inferential and descriptive tools of analysis the statistical methods involving the collection, presentation, and characterization of a set of data in order to properly describe the various features of that set of data to get possible degree of relationship between the variables that determine performance of the designated health care service providers in Kenya. For data processing, S.P.S.S. was used to get the difference between sample means and resulting information presented in form of tables and charts to offer a clear and understandable data (Kothari, 2008).

In order to assess the efficiency and effectiveness the organization must know how well a sample statistic estimates a population parameter. The sample mean is considered as an efficient estimator of the population mean. It is important to put in place an effective performance management programme that ensured all parties concerned are clear on what needs to be done – in this case, the participating hospitals, working with NHIF in healthcare services provision (Carrel et al., 2000), (Armstrong, 2014). Most organizations dwell on the performance appraisal which is but a small percentage of the performance management programme. In most organizations the performance is usually done once a year. Carrel et al. (2000), observed that performance related feedback has been described as one of the most important methods for enhancing employee development and improving individual performance. Performance management refers to "getting better results from the organization, teams and individuals, by measuring and managing performance within agreed frameworks of objectives and competence requirements, assessing and improving performance, identifying learning and development needs" (Armstrong, 2014). Aswathoppa (2000) defines performance management as the assessment of the individual's performance in a systematic way based on job knowledge, quality and quantity of output, initiative, leadership abilities, supervision, dependability, cooperation and judgment, among others. These are the qualities that need to be embraced by the selected institutions, as they implement the NHIF mandates to its customers and stake holders.

Content analysis will be used in analyzing qualitative data. Creswell (2003) defines content analysis as a technique for making inferences by systematically and objectively identifying specific characteristic of messages around common themes and using the same to relate trends. The areas the researcher will choose to focus on will depend both on the themes that have emerged from the data and the research questions. Mugenda and Mugenda (2008) posits that the main purpose of content analysis is to study the existing information in order to determine factors that explained a specific phenomenon while Kothari (2014) stated that, content analysis uses a set of categorization for making valid and replicable inferences from data to their context.

The model is expressed:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where

Y = performance
X1= Market Research
X2= Working relations
X3= Communication
X4= Alignment and harmonization

# **3.12 Diagnostic Tests**

Multicollinearity may occur when independent variables overlap with respect to the information they provide in explaining the variation in the dependent variable (Groebner *et al.*, 2008). To measure this, the researcher will use variance Inflation Factor (VIF) for

each independent variable in the model; a VIF equal to 1.0 for a given independent variable will indicate that the independent variable is not correlated with the remaining independent variables in the model. The greater the multicollinearity, the larger the *VIF* (Groebner *et al.*, 2008). Anderson *et al.* (2010) also recommend computing the sample correlation coefficient to determine the extent to which the variables are related. To take care of all the above; the researcher will have to drop some variables from the model, acquire additional data, rethink the model or transform the variables in order to minimize the problem of multicollinearity (Gujarati, 2010).

In case the error terms do not have constant variance; the researcher will have to detect heteroskedasticity. As stated by Williams (2015), the problem may arise as a result of the following: some respondents might provide more accurate responses than others leading toviolation, subpopulation differences or other interaction effects with assumption that no differences exist, important variables may be omitted from the model. To detect heteroskedasticity, the researcher will follow Williams (2015) recommendation, that is; visual inspection of residuals plotted against fitted values, Alternatively, the researcher may decide on using graphical procedure to detect this or Gold field- quandt test (analytical) as recommended by Gujarati (2010). To deal with the problem of heteroskedasticity, the researcher will respecify the model/ transform the variables or use Robust Standard Errors to correct the issue (William, 2015).

To test whether data are normally distributed or not; the researcher will use Shapiro-wilk test as recommended by Ghasemi and Zahediasl, (2012) Ghasemi and Zahediasl (2012) posits that Shapiro test can be conducted in the SPSS Explore procedure (Analyze-Descriptive Statistics-Explore-Plots-Normality plots with test). It is based on the data and the corresponding normal scores. It provides better power (ability to detect whether a sample comes from a non-normal distribution). It is also highly recommended by the scholars as the best choice for testing the normality of data as it works best for data sets, with <50, and can be used with larger data sets.

To check whether there is a relationship between the independent variable and dependent variable, the researcher will carry out a linearity test (Nau, 2014). To detect this assumption, the researcher will check on residual plots (on the vertical axis) against the independent variable (on the horizontal axis). If the residuals band around 0 with no systematic pattern displayed; then the relationship between (X) and (Y) will be linear. And if the residual plot shows a systematic pattern, then the researcher will have to transform the independent variable so that the revised model is able to produce residual plots that will not systematically vary from 0(Groebner, Shannon, Fry, & Smith, 2008)

In case there are unusual values as a result of violating model assumption; then the researcher will have to check on outliers for correction (Anderson, Sweeney, Williams, Freeman & Shoesmith, 2014). Anderson *et al.* (2014) recommended a consideration of another model incase such an issue take place. To detect outliers, the researcher will check whether there are standardized residuals to identify the problem. If an observation deviates greatly from the pattern of the rest of the data, then the corresponding standardized residual will be large in absolute value. This will be carried out by the use of computer as recommended by (Anderson *et al.*, 2014). To handle the issue of outliers, the researcher will first check to see whether there is valid observation; this is because error might take place while recording data or entering the data into the computer files (Anderson *et al.*, 2014). Anderson *et al.* (2014) posits that using the incorrect data value normally affect good fit and identification of outliers enable the researcher to correct the data error and improve the regression result.
Because response rate may be influenced by a number of factors such as mode of administration (face to face, phone, mail, web-based), leading to decline in survey participation, then the researcher will check on non-response bias as this may threaten external validity, this means that valid conclusion might be drawn. To detect this issue, the researcher will check on three sauces : first, whether the sampling frame omits some units of the survey population either accidentally or deliberately, second, whether no information is collected from a sampled unit due to refusal or non-contact and finally, to check whether the sampled unit agree to participate in the study but information on all the areas under investigation is not collected because the sample unit refuses or is not unable to answer a particular question or the researcher fails to ask the question by mistake Atif, Richards, and Bilgin (2012). To take care of non-response bias, the researcher will carry out a non-response analysis as recommended by Atif et al. (2012). The analysis will help in identifying potentially biased estimates. Atifet al. (2012) also recommend summarizing all available methods to estimate the non-response bias as a way of correcting the issue. This is done by carrying follow-up approach, wave analysis, passive non-respondent analysis, and interest level analysis.

Because errors introduced by methods and tools may contaminate analytical results leading to negative effect of both the magnitude and relationship (type I and type II error), the researcher will have to take care of Common Method Variance (CMV) (Bichhorn, 2014). To detect CMV, Sharma, Crawford and Yetton (2009) recommend the Harman single factor test or use of the Marker variable technique that control CMV by including "a measure of the assumed source of method variance as a covariance in the statistical analysis". To reduce the issue of CMV, the researcher will employ the use of common source rater(one source that provide both independent and dependent variables), use survey instrument design, the items' context(such as its position within the sequence of questions, its spatial relationship to other questions and the number of questions), initiate a raters motivation to answer correctly – this will be done based on the survey instruments characteristics such as the raters knowledge of the subject, their

perceived ability to process and understand the subject and the length of survey instrument (Eichhorn, 2014).

Because the instruction at the top of a questionnaire may influence the answers provided by the different respondents in the same general direction, causing the indicators to share a certain amount of common variation or respondents answering questions in a questionnaire in a particular way, a gain causing the indicators to share a certain amount of common variation (Kock, 2015). The researcher will have to care of CMB. In this case, Kock (2015) recommend full collinearity test with a model that passes standard convergent and discriminant assessment criteria based on a confirmation factor analysis.

Kock (2015) proposed the full collinearity test as a comprehensive procedure for the simultaneous assessment of both vertical and lateral collinearity. Through this procedure, which is fully automated by the software WarpPLS, the occurrence of a VIF greater than 3.3 is proposed as an indication of pathological collinearity, and also as an indication that a model may be contaminated by common method bias. Therefore, if all VIFs resulting from a full collinearity test are equal to lower than 3.3, the model can be considered free of common method bias. Again, the researcher will take not that; an increase in the overall levels of collinearity in a model, correspond to an increase in the full collinearity VIFs for the latent variable in the model, is a clear outcome of common method bias.

#### **CHAPTER FOUR**

#### **RESEARCH FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This chapter provides the research findings and related discussions for both the prestudy and the actual study towards the objectives. In this chapter therefore, there are the results for reliability test, validity test, adequacy and normality tests that the researcher carried out too check on the prudence of the questionnaire.

#### 4.2 Respondent Rate

The study sought to establish the respondent rate. Results indicate that the majority (71%) of the questioners were returned while (29%) were unreturned.

#### Table 4.1: Response Rate

Response Rate	Frequency	Percent
Returned	75	65.2%
Unreturned	40	34.8%
Total	115	100%

#### 4.2.1 Age of the Study Sample

#### **Response by age**

The responses indicated that most of the employees who were drawn from middle and top management level were in the age bracket of 40- 50 years at 44.0% and 32.0% for the age bracket 30- 40 years. These age brackets mainly comprise the operation managers and implementers of policies within the hospitals. The least were in the age

bracket of 30 years and below at 9.3%. These are employees who are yet to rise to management level, followed by above 50 years at only 14.7% (See Table 4.2).

	Frequency	Percent	Valid Percent	Cumulative Percent
Below 30 years	7	9.3	9.3	9.3
30-40 years	24	32.0	32.0	41.3
40-50 years	33	44.0	44.0	85.3
50 and above	11	14.7	14.7	100.0
Total	75	100.0	100.0	

#### Table 4.2 Age of respondents

# 4.3 Reliability and Validity of Research Instrument

A pilot testing was carried out prior to implementation of the study to ensure that the research instrument measured what was intended in conformity with (Cooper & Schindler, 2010). During the pilot test phase of this study, Reliability Test was also performed; to this end, the Cronbach's Coefficient Alpha was employed. Cronbach's Alpha is a reliability coefficient that indicates how well items in a set are positively correlated to one another (Sekaran, 2003). As rule of thumb, reliability value of 0.7 and above is recommended for most researches to denote the research instrument as reliable (Sekaran, 2003; Robert, 2006).

#### **4.3.1 Reliability Test**

Reliability is a measure which indicates the extent to which the research instrument has no bias (error free) thus ensuring consistent measurement across time and the various items in the instrument. Cronbach's alpha constant which is a measure of internal consistency and average correlation was used to establish the reliability of the instrument. Cronbach's alpha values normally ranges between 0 and 1(Kipkebut, 2010). As a rule of thumb acceptable alpha shouldbe at least 0.70, (Mugenda & Mugenda, 2003). Higher alpha coefficient values mean there is consistency among items in measuring the concept of interest. Cronbach constant test was carried out for every variable.

The variable Market Research and Organizational Data had eleven factors. Reliability test was carried out on the instrument and Cronbach constant was 0.521 which was far much below 0.7 but after removing factor Nine the reliability increased to 0.812 which was above the threshold. Items on variable Working relations did not require any adjustment since the alpha constant was 0.748. Communication on the other hand Cronbach'salpha constant was 0.605. However, after removing factor four, the reliability increased to 0.824. Harmonization had an alpha constant of 0.621 which rose to 0.714 after removing factor five. Lastly the dependent variable (Performance) had alpha constant 0.754 so no factor was removed. The results on the Table 4.1 are in line with Katou (2008) who stated that the questionnaire for the study will be considered reliable if the Cronbach's Alpha coefficient is greater than 0.70. Therefore the findings shown in the Table 4.3 are reliable enough for the study.

Variables	Cronbach's Alpha before removing	Cronbach's Alpha after removing	No of Items before removing some factors	No of Items after removing some factors
	some items	Some items		
Market Research	0.521	0.812	11	10
Working relations	0.748	0.748	5	5
Communication	0.605	0.824	4	3
Harmonization	0.621	0.714	6	5
Service Performance	0.754	0.754	7	7
Average	0.6498	0.7704		

#### Table 4.3: Reliability of Instrument

#### 4.3.2 Validity Test

Validity test was also done on the research instrument using a method of Principal Component Analysis (PCA) to extract the factors. The findings are summarized in Table 4.2through to Table 4.5. The criteria, as suggested by Hair, *et al.*, (2010), was that factor loadings greater than 0.40 were considered statistically significant for studies with sample size less than 200. Consequently in this study, 0.40 was used as the cut- off for loadings since the sample size of the study was 140. The higher the factor loadings were, the greater they were related to the variable.

#### 4.3.2.1 Market Research

The variable Market Research had 11 items as originally compiled. However one item with loadings less than 0.40 was removed as shown in Table 4.4. Therefore 10 factors for Market Research with factor loadings between 0.445 and 0.772 were considered valid for the constructs represented.

	Market Research	Factor
		Loadings
1	New ideas and approaches on work methods are continuously brought	.706
	in and encouraged by management.	
2	There is no official policy on research and development.	.674
3	The organization supports the employees in their effort to join other	.497
	formal or informal organizations and people outside for networking.	
4	The organization is regularly in touch with its Harmonization and	.524
	industry peer experts for benchmarking purposes	
5	The organization does not articulate to members about the vision,	.445
	mission, goals, and objectives regularly.	
6	Meetings are held regularly to inform all employees about the recent	.690
	innovative and new methods and applications by the organization.	
7	There exists no formal mechanism for disseminating and guaranteeing	.772
	sharing of industry best practices in different organization's	
	departments and functions.	
8	There are formal mechanisms to ensure that all members of the	.568
	organization are availed and share the objectives to which they are	
	committed.	
9	For the purpose of sharing knowledge, work experiences and relations	.389**
	The organization encourages and facilitates regular seminars for	
10	The enconingation has instituted formal machanisms for execting	562
10	The organization has instituted formal mechanisms for creating amplexies environments of the importance of other people departments?	.303
	employee awareness of the importance of other people, departments	
11	There is a serious affort in the organization to ansure smooth working	171
11	relations among all levels of amployees and management to ansure	.4/4
	alignment and harmonization of all functions	

#### **4.3.2.2** Working relations

The study intended to measure the effect of working relations by using 5 items. All the 5 items had factor loadings above 0.40 as shown in Table 4.5 that is between 0.553 and 0.842. Therefore all were found to be valid enough for use in the study.

#### **Table 4.5 Factor Loadings for working relations**

	Working relations	Factor Loadings
1	The organization emphasizes and enhances high interactive	.671
	actions among all employees.	
2	All departments and sections in the organization relate	.632
	harmoniously with each other.	
3	There is a high level of both internal and external customer	.736
	relationship culture in the organization	
4	There is a policy of interactive relationships connecting	.842
	market research, communication, Harmonization of roles and	
	tasks in the entire organization.	
5	There are regular meetings and seminars organized for	.553
	continuous assessment of organizational cohesiveness.	

#### 4.3.2.3 Communication

From the original list, indicating Communication, eight items had been compiled. Subsequently one item with a low loading of 0.376 was discarded leaving seven items with factor loadings between 0.500 and 0.860 as shown in Table 4.6.

1 able 4.6: Factor Loadings for Communicatio	Table 4.0	5: Fact	or Loadin	igs for C	Communication
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	Communication	Factor
		Loadings
1	Organizational communication has positively influenced employee	.501
	attitudes, commitment to service performance.	
2	Communication has enhanced work relations between employees for	.667
	better customer service performance.	
3	The level of communication between departments, employees and	.564
	management is at best for service performance.	
3	The organizational alignment and harmonization has been emphasized	.673
	regularly and communicated for better service performance.	
4	Organizational communication has positively influenced employee	.376**
	attitudes, commitment to service performance.	

# 4.3.2.4 Harmonization

From the original list of six factors put forward to measure harmonization one had a factor loading of 0.117 which was below the threshold of 0.40. Consequently it was expedient to discard it leaving eight items with factor loadings of between 0.457 and 0.653 as shown in Table 4.7.

Table 4.7: Factor	Loadings for	Harmonization
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	Harmonization	Factor
		Loadings
1	The organization insists on harmonization of all tasks and roles in the	.457
	process of service delivery and outcome of the service	
2	The organization has enhanced reliability to perform service dependable	.631
	and accurately at all times.	
3	All employees of the organization are responsive, willing to help clients	.653
	and to provide prompt services all the time.	
4	The organization ensures that all employees possess knowledge,	.612
	courtesy, ability to convey trust and confidence to assure clients.	
5	All employees are aligned and harmonized to care, and pay individual	.117**
	Attention to clients through approachability, sensitivity, and	
	understanding their needs.	
6	The physical facilities in the organization, equipment, personnel, and	.616
	communication materials are modern.	

# **4.3.2.5 Service Performance**

From the original list compiled to measuring Service Performance all 7 items that were considered had acceptable factor loadings of between 0.539 and 0.758 as shown in Table 4.6 and subsequently considered valid for inclusion in the data collection instrument and further analysis.

	Service Performance	Factor
		Loadings
1.	The organization has experienced high business growth in	.586
	the last four (4) years.	
2.	New establishments and departments have been added in	.711
	the organization in the last four (4) years.	
3.	Many new innovative services and applications have been	.709
	introduced in the organization in the last four (4) years.	
4.	The working relations and motivation are very high in the	.606
	organization in the last four (4) years.	
5.	The organization is enjoying increasing number of clients	.745
	in the last four (4) years.	
6.	The organization has been practicing customer driven	.758
	quality management in the last four (4) years.	
7. h)	There exists continuous benchmarking service	.539
	performance in the organization in the last four (4) years.	

#### Table 4.8: Factor Loadings for Service Performance

#### 4.4 Sample Adequacy Test (Kaiser-Meyer- Olkin (KMO))

The sample adequacy was measured using the Kaiser-Meyer- Olkin (KMO) test. The sampling adequacy should be greater than 0.5 for a satisfactory factor analysis to proceed. A common rule is that a researcher should have 10 - 15 participants per variable. A factor analysis is inappropriate when the sample size is below 50 (Fiedel, 2005). Kaiser (1974) recommends 0.5 as minimum (barely accepted), values between 0.7- 0.8 acceptable, and values above 0.9 are superb.

#### Table 4.9: KMO and Bartlett's test

Market Research	Kaiser-Meyer-Olkin Adequacy.	Meas	sure	of	Sampling	.707
	1 5		Appr	ox. C	hi-Square	300.162
	Bartlett's Test of Spher	ricity	df		-	45
			Sig.			.000
Working relations	Kaiser-Meyer-Olkin	Meas	ure	of	Sampling	764
	Adequacy.					.704
			Appr	ox. C	hi-Square	426.463
	Bartlett's Test of Spher	ricity	df			55
~			Sig.		~ 11	.000
Communication	Kaiser-Meyer-Olkin Adequacy.	Meas	sure	of	Sampling	.644
			Appr	ox. C	hi-Square	304.174
	Bartlett's Test of Spher	ricity	df			28
			Sig.			.000
Harmonization	Kaiser-Meyer-Olkin Adequacy.	Meas	sure	of	Sampling	.810
			Appr	ox. C	hi-Square	350.593
	Bartlett's Test of Spher	ricity	df			28
			Sig.			.000
Service Performance	Kaiser-Meyer-Olkin Adequacy.	Meas	sure	of	Sampling	.736
			Appr	ox. C	hi-Square	442.465
	Bartlett's Test of Sphere	icity	df			66
			Sig.			.000

From table 4.9, the sample was acceptable since the KMO values were mainly between 0.707 and 0.810. The least value was 0.644 which was also good enough since it was above the minimum of 0.5.

#### **4.5 Normality Test**

# **Skewness and Kurtosis Test for Normality**

The study sought to find out how well the distribution could be approximated using the normal distribution. Consequently skewness and Kurtosis was employed as shown in table 4.8. Skewness measures the deviation of distribution from symmetry and Kurtosis measures 'peakness' of the distribution (Ming'ala, 2002).

Variables	Descriptive	Statistic	Std. Error	Z score
	Std. Deviation	5.83031		
Market Research	Skewness	077	.131	-0.256
	Kurtosis	221		-0.631
	Std. Deviation	6.21785	.349	
Working relations	Skewness	.278	.139	0.750
	Kurtosis	.265	.459	0.475
	Std. Deviation	7.87476	.321	
Communication	Skewness	426	.231	-1.131
	Kurtosis	1.052	.359	2.627
	Std. Deviation	5.57903		
Harmonization	Skewness	875	.231	-3.978
	Kurtosis	1.163	.459	2.644
	Std. Deviation	8.29404		
Service Performance	Skewness	092	.231	-0.872
	Kurtosis	.486	.459	1.105

# **Table 4.10: Skewness and Kurtosis**

The values of skewness and Kurtosis should be zero in normal distribution (field 2009). Z score values for both skewness and kurtosis normally fall within -1.96 and +1.96 if P-values are 0.05 for normally distributed data. From the finding as indicated in Table 4.10, it is evident that all the data for the four variables were normally distributed.

Although it is assumed in multiple linear regression that the residuals are distributed normally it is a good idea before drawing final conclusions, to review the distributions of major variables of interest (Ming'ala, 2002). Histograms are a good way of getting an instant picture of the distribution of data (Field 2009). Therefore histogram was also used in the study to test for normality on the data that was used in the study since t- test, regression and ANOVA was based on the assumption that the data was sampled from a Gaussian distribution (Indiana, 2011). The result indicates that data was normally distributed since there was no deviation on the normal distribution curve figure 4.1 shows the result of the finding for the dependent variable (service performance)



**Figure 4.1: Histogram for Normality Test (Service Performance)** 

#### Kolmogorov- Smirnov and Shapiro- Wilk Test for Normality

Kolmogorov- Smirnov and Shapiro- Wilk test was also used to test the normality of all the variables. They compare the scores in the samples and check whether they have the same mean or standard deviation. In the finding, the p- values were greater than. 05 showing that the distributions were normally distributed for the case of Shapiro-Wilk. On the other hand Kolmogorov- Smirnov test also shows that all the variables were normally distributed since the p- values were greater than .05. The details of the findings are shown in Table 4.11.

Variables	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	Df	Sig.	
Market Research	.054	75	.200*	.991	75	.857	
Working relations	.068	75	.200*	.985	75	.520	
Communications	.052	75	.200*	.993	75	.966	
Harmonization	.067	75	.200*	.986	75	.604	
Service Performance	.069	75	.200*	.991	75	.875	

#### Table 4.11: Kolmogorov-Smirnov and Shapiro-Wilk

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

a. Lilliefors Significance Correction

#### Normality Test using Q-Q plot

The normal Q-Q plot for the dependent variable shown in Figure 4.2 shows that most of the observed values were falling along the straight line indicating that service performance variable was normally distributed. This is consistent with the earlier findings based on skewness and Kurtosis test, Kolmogorov- Smirnov and Shapiro-Wilk test.



Figure 4.2: Q-Q plot

#### **Outliers Test**

An outlier may be described as any observation far from the rest of other observation. The presence of outlier in any given data may make the data not to assume Gaussian condition that is normality condition. It is therefore important to test the presence of outliers in any given data and even remove them for normality condition to be satisfied. In this study the outliers' presence was tested using box plot and the findings were given in the table 4.12. From the finding, two variables had 2 outliers and one variable had I outlier. Despite the presence of these outliers, their effect as far as normality condition is concerned was negligible since the normality condition was not violated for all the variables.

Variables	Position of	Total number of
	observed outliers	outliers
Market Research	-	0
Working relations	13, 63	2
Communication	44, 47	2
Harmonization	47	1
Service Performance	-	0

#### Table 4.12: Outliers Detected

#### **4.6 Homogeneity Test for Variance**

Apart from the assumptions of normality test homogeneity of variance is another assumption which is normally made and it means that the variance of one variable should remain constant at all levels. Homogeneity of variance can be done using Levene test of Homogeneity. Homogeneity of variance is normally done by looking at the value of variances and see whether they remain constant when plotted. However the approach may be misleading and prone to many errors therefore Levene test as proposed by Levene (1960), is used to test the null hypothesis that the variances in various groups are equal that is the differences between the variance is zero. Looking at Levene statistics values in table 4.13, the variances in various groups were equal so the differences between the variance were zero.

		Levene	df1		Sig.
		Statistic		df2	
	Based on Mean	1.775	1	74	.186
	Based on Median	1.416	1	74	.237
Market	Based on Median and with adjusted df	1.416	1	89.458	.237
	Based on trimmed mean	1.782	1	74	.185
	Based on Mean	.011	1	74	.917
XX7 1	Based on Median	.055	1	74	.815
Relationship	Based on Median and with adjusted df	.055	1	95.930	.815
	Based on trimmed mean	.026	1	74	.872
	Based on Mean	.016	1	74	.900
	Based on Median	.007	1	74	.933
Communication	Based on Median and with adjusted df	.007	1	95.984	.933
	Based on trimmed mean	.016	1	74	.901
	Based on Mean	.031	1	74	.860
	Based on Median	.270	1	74	.605
Harmonization	Based on Median and with adjusted df	.270	1	82.563	.605
	Based on trimmed mean	.045	1	74	.833
	Based on Mean	4.036	1	74	.047
Comvios	Based on Median	3.196	1	74	.077
Service Performance	Based on Median and with adjusted df	3.196	1	92.320	.077
	Based on trimmed mean	4.028	1	74	.048

# Table 4.13: Test of Homogeneity of Variance

#### **4.7 Linearity Test**

#### **4.7.1 Linearity test between Market Research and Performance**

To find out whether there was linear relationship between Market Research and Performance Pearson moment's correlation coefficients was used as suggested by Cohen, West and Aiken, (2003). The result of the finding is presented in table 4.14. The result indicates that the variables Performance and Market Research had a strong positive relationship indicated by a correlation coefficient value of 0.693<sup>\*\*</sup>. This suggests that there was a linear positive relationship between Market Research and Performance which implies that an increase in Market Research value would lead to a linear increase in Performance.

		Service Performance	Market Research
Service	Pearson Correlation	1	.693**
Performance	Sig. (2-tailed)		.000
	Ν	75	75
Market Research	Pearson Correlation	.693**	1
	Sig. (2-tailed)	.000	
	Ν	75	75

#### **Table 4.14: Market Research Correlations Coefficients**

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

Than product moment correlation coefficient, linearity was also tested using scatter plot between Performance and Market Research and the result in Figure 4.3 clearly indicates that there was linear relationship between Performance and Market Research.



Figure 4.3: Scatter plot between Service Performance and Research Market

#### 4.7.2 Linearity test between working relationship and Service Performance

The linearity test between Service Performance and working relationship also show strong positive relationship as indicated by a correlation coefficient value of 0.614<sup>\*\*</sup>. This implies that there is a linear positive relationship. Thus an increase in working relationship would result in a linear increase in Performance

	-	Performance	working relationship			
	Pearson Correlation	1	.614**			
	Sig. (2-tailed)		.000			
Service Performance	Ν	75	75			
	Pearson Correlation	.614**	1			
	Sig. (2-tailed)	.000				
working relationship	Ν	75	75			
**. Correlation is significant at the 0.01 level (2-tailed).						

Tal	ble	4.15	: working	relationsh	ip C	Correl	ations	Coefficients
-----	-----	------	-----------	------------	------	--------	--------	--------------

Scatter plot between Performance and working relationship as shown in figure 4.4 shows clearly that there was linear relationship between Performance and working relationship.



Figure 4.4: Scatter plot between Performance and working relationship

# 4.7.3 Linearity Test between Communication and Service Performance

The linearity test between Service Performance and Communication also show strong positive relationship as indicated by a correlation coefficient value of 0.499<sup>\*\*</sup>. This implies that there is a linear positive relationship. Thus an increase in Communication would result in a linear increase in Performance

Table 4.16: Communication	Correlations	Coefficients
---------------------------	--------------	--------------

		Performance	Communication			
	Pearson Correlation	1	.499**			
Service Performance	Sig. (2-tailed)		.000			
	Ν	75	245			
	Pearson Correlation	.499**	1			
	Sig. (2-tailed)	.000				
Communication	Ν	75	75			
**. Correlation is significant at the 0.01 level (2-tailed).						

Scatter plot between Performance and Communication as shown in Figure 4.5 shows clearly that there was linear relationship between Performance and working relationship.



Figure 4.5: Scatter plot between Performance and Communication

#### 4.7.4 Linearity Test between Harmonization and Service Performance

Similarly linearity test between Service Performance and Harmonization also show strong positive relationship as indicated by a correlation coefficient value of 0.408<sup>\*\*</sup>. This implies that there is a linear positive relationship. Thus an increase in Communication would result in a linear increase in Performance

		Performance	Harmonization			
	Pearson	1	.408***			
	Correlation					
	Sig. (2-tailed)		.000			
Service Performance	Ν	75	245			
	Pearson	$.408^{**}$	1			
	Correlation					
	Sig. (2-tailed)	.000				
Harmonization	Ν	75	75			
**. Correlation is significant at the 0.01 level (2-tailed).						

# **Table 4.17: Harmonization Correlations Coefficients**

Scatter plot between Performance and Harmonization, as shown in Figure 4.6, clearly suggests that there was linear relationship between Performance and Harmonization or Harmonization.



Figure 4.6: Scatter plot between Performance and Harmonization

#### **Collinearity Diagnostic Test**

Table 4.16 shows the eigenvalues of the scaled, uncentered cross products matrix, the condition index and variance proportions for each of the predictor (independent variable). If an egeinvalue is larger than the others then the uncentered cross products matrix can be highly be affected by small changes in the independent variables or outcome. If the eigenvalues are fairly similar then the model obtained is likely to be unchanged by small changes in measured variables (Myers, 1990). According to the study findings both models had eigenvalues fairly lager than the rest indicating that the models obtained were likely to be changed by small changes in measured variable. The condition index is another way of expressing eigenvalues and they represent square root ratio of the largest eigenvalue to the eigenvalue of interest. The condition index will always be 1 for the dimension with the largest eigenvalue, however, the condition index value can be larger than 1. Large values may indicates that collinearity exist but it is also worth noting that there is no specific value or rule about how large the condition index

value should be to indicate collinearity problems. According to the findings on Table 4.16 the model had final condition index value 51.070. The values for dimensions in each model were fairly close to each other and therefore there was no collinearity.

Alternatively collinearity may be detected looking for Predictors that have high variance proportions on the same small eigenvalues. High variance proportions will indicate that the variances of their regression coefficients are dependent. In this study 57% of the variance in regression coefficient of Market Research was associated with eigenvalue in dimension number 5, 48% of the variance in the regression coefficient of working relationship was associated with eigenvalue in dimension 2 and 99% of the variance in the regression coefficient of Communication was associated with eigenvalue in dimension 3. 66% of the variance in regression coefficient of harmonization was associated with eigenvalue in dimension 4. This clearly shows that there was no dependency between the four explanatory variables for model.

Model Dimension Eigenvalue		Condition	ondition Varian		nce Proportions			
			Index	(Constant)	X1	X2	X3	X4
	1	4.927	1.000	00.	.00	.00	.00	.00
	2	.055	9.487	.01	.01	.01	.01	.48
1	3	.011	20.861	.85	.06	.99	.00	.44
	4	.005	30.954	.11	.36	.00	.66	.05
	5	.002	51.070	.04	.57	.00	.33	.02
a. Dependent Variable: Y11								

#### Table 4.18: Collinearity Test

# 4.8 Descriptive Analysis

This section contains descriptive statistics for all the variables used in this study. These include: Market research, working relations, communication, harmonization, and service performance. This has been captured in Table 4.19 through to Table 4.17.

### Table 4.19: Market Research

Statement	SD	D	Ν	Α	SA
New ideas and approaches on work methods are	10.7%	22.9%	9.3%	43.6%	13.6%
continuously brought in and encouraged by					
management.					
There is no official policy on research and	8.6%	25.0%	10.0%	46.4%	10.0%
development.			0		
The organization supports the employees in their	26.4%	27.1%	8.6%	20.7%	17.1%
effort to join other formal or informal					
The organization is regularly in touch with its	47 10/	22 80/	0 00/	2 004	7 404
avternal environment and industry peer experts	47.1%	33.0%	0.0%	2.9%	7.4%
for benchmarking purposes					
The organization does not articulate to members	15.0%	37.1%	32.9%	11 4%	3.6%
about the vision, mission, goals, and objectives	101070	571170	52.770	1111/0	2.070
regularly.					
Meetings are held regularly to inform all	2.9%	7.2%	5.8%	56.8%	27.3%
employees about the recent innovative and new					
methods and applications by the organization.					
There exists no formal mechanism for	9.4%	20.1%	23.7%	38.1%	8.6%
disseminating and guaranteeing sharing of					
industry best practices in different organization's					
departments and functions.	14 50/	<b>21</b> 00/	<b>01</b> 00/	22.201	0.40/
There are formal mechanisms to ensure that all	14.5%	31.9%	21.0%	23.2%	9.4%
members of the organization are availed and					
share the objectives to which they are committed.	5 00/	12 20/	14 40/	27 40/	20.00/
experiences and relations. The organization	5.0%	12.2%	14.4%	57.4%	50.9%
encourages and facilitates regular seminars for					
interaction of all cadres of employees					
The organization has instituted formal	9.4%	26.6%	10.1%	41 7%	12.2%
mechanisms for creating employee awareness of	2.170	20.070	10.170	11.770	12.270
the importance of other people, departments'					
activities and organization-wide communication.					

SD= Strongly Disagree; D= Disagree; N= Neither Agree nor Disagree; A= Agree; SA= Strongly Agree

In Table 4.19, it can be seen that the majority of the respondents agreed (43.6%) that new ideas and approaches on work methods are continuously brought in and encouraged by management. 13.6% of the respondents strongly agreed with the statement. That means that the majority of the respondents (57.2%) were in an agreement with this statement. Cumulatively, 56.4% of the respondents agreed that there is no official policy on research and development. From the foregoing and from the Table 4.19, it is evident that the majority of the respondents concurred with the statements under probe.

#### 4.8.1 Working relations

# Table 4.20: Working relations

Statement	SD	D	Ν	Α	SA
The organization emphasizes and enhances high	22.1%	32.9%	23.6%	17.9%	3.6%
interactive actions among all employees.					
All departments and sections in the organization	48.6%	30.7%	7.1%	11.4%	2.1%
relate harmoniously with each other.					
There is a high level of both internal and external	5.0%	26.4%	19.3%	44.3%	5.0%
customer relationship culture in the organization					
There is a policy of interactive relationships	6.5%	13.7%	17.3%	48.2%	14.4%
connecting market research, communication,					
Harmonization of roles and tasks in the entire					
organization.					
There are regular meetings and seminars	4.3%	17.9%	15.7%	54.3%	7.9%
organized for continuous assessment of					
organizational cohesiveness.					
The organization emphasizes and enhances high	8.9%	18.5%	27.4%	27.4%	5.2%
interactive actions among all employees.					
All departments and sections in the organization	16.4%	34.3%	12.9%	26.4%	10.0%
relate harmoniously with each other.					
There is a high level of both internal and external	2.9%	9.3%	9.3%	50.7%	27.9%
customer relationship culture in the organization					
There is a policy of interactive relationships	20.0%	32.9%	10.0%	27.1%	10.0%
connecting market research, communication,					
Harmonization of roles and tasks in the entire					
organization.					
There are regular meetings and seminars	8.6%	19.3%	11.4%	45.7%	15.0%
organized for continuous assessment of					
organizational cohesiveness.					

From Table 4.20, the following were the response from the respondents: 22.1% strongly disagreed, and 32.9% disagreed that the organization emphasizes and enhances high interactive actions among all employees with this statement. Looking at the second statement of all departments and sections in the organization relate harmoniously with each other, 48.6% of the respondents strongly disagreed and 30.7% of the respondents disagreed. On the third statement of there is a high level of both internal and external customer relationship culture in the organization, cumulatively, 49.3% of the respondents agreed with this statement. The fourth statement of there is a policy of interactive relationships connecting market research, communication, Harmonization of roles and tasks in the entire organization 62.6% agreed. The study also sought to establish if the organization emphasizes and enhances high interactive actions among all employees where 22.1% strongly disagreed, and 32.9% disagreed with this statement. On the statement of all departments and sections in the organization relate harmoniously with each other, 48.6% of the respondents strongly disagreed and 30.7% of the respondents disagreed. The study also sought to establish whether there is a high level of both internal and external customer relationship culture in the organization, cumulatively, 49.3% of the respondents agreed with this statement. On the statement of there is a policy of interactive relationships connecting market research, communication, Harmonization of roles and tasks in the entire organization 62.6% agreed.

#### **4.8.2** Communication

#### Table 4.21: Communication

Statements	SD	D	Ν	A	SA				
Organizational communication has									
positively influenced employee attitudes, commitment to service performance.	30.9%	32.4%	12.2%	14.4%	10.1%				
Communication has enhanced work	10.0%	8.6%	12.1%	48.6%	20.7%				
relations between employees for better									
customer service performance.									
The level of communication between	12.9%	48.9%	9.4%	23.7%	5.0%				
departments, employees and management is									
at best for service performance.									
The organizational alignment and	9.4%	11.5%	14.4%	46.0%	18.7%				
harmonization has been emphasized									
regularly and communicated for better									
service formance.									

In Table 4.21 the majority of the respondents disagreed with the fact that organizational communication has positively influenced employee attitude, commitment to service performance. That came to 63.3% of the respondents. 69.3% agreed that communication has enhanced work relations between employees for better customer service performance. 48.9% disagreed that the level of communication between departments, employees and management is at best for service performance. On the last statement of the organizational alignment and harmonization has been emphasized regularly and communicated for better service performance, 64.7% agreed with the statement.

#### 4.8.3 Harmonization

#### Table 4.22: Harmonization

Statement	SD	D	Ν	Α	SA
The organization insists on harmonization of	7.1%	7.9%	8.6%	34.3%	42.1%
all tasks and roles in the process of service					
delivery and outcome of the service					
The organization has enhanced reliability to	2.1%	2.9%	4.3%	31.4%	59.3%
perform service dependable and accurately at					
all times.					
All employees of the organization are	6.4%	18.6%	25.7%	40.7%	8.6%
responsive, willing to help clients and to					
provide prompt services all the time.					
The organization ensures that all employees	21.%	29.0%	23.2%	18.8%	7.2%
possess knowledge, courtesy, ability to					
convey trust and confidence to assure clients.	C 00/	11.00/	26.000	47 00/	0.00
All employees are aligned and harmonized to	6.0%	11.9%	26.9%	47.0%	8.2%
care, and pay individual Attention to clients					
through approachability, sensitivity, and					
The physical facilities in the proprintian	2.00/	11 40/	9 60/	50.00/	27 10/
The physical facilities in the organization,	2.9%	11.4%	8.0%	50.0%	27.1%
materials are modern					

Table 4. 22 indicate that 76.4% of the respondents agreed that the organization insists on harmonization of all tasks and roles in the process of service delivery and outcome of the service. 90.7% of the respondents agreed that the organization has enhanced reliability to perform service dependable and accurately at all times. 49.3% of the total population interviewed agreed that all employees of the organization are responsive, willing to help clients and to provide prompt services all the time. 50.0% of the respondents disagreed with the fact that the organization ensures that all employees possess knowledge, courtesy, ability to convey trust and confidence to assure clients. 55.2% of those

interviewed cumulatively agreed that all employees are aligned and harmonized to care, and pay individual Attention to clients through approachability, sensitivity, and understanding their need. 77.1% of those interviewed agreed that the physical facilities in the organization, equipment, personnel, and communication materials are modern.

#### **4.8.4 Service Performance**

Service performance was the study's dependent variable and the study also interviewed the sample of the population to establish facts about service performance. This was summarized in Table 4.23.

#### Table 4.23: Service Performance

Statement	SD	D	Ν	A	SA
The organization has experienced high business	19.0%	38.0%	8.0%	25.5%	9.5%
growth in the last four (4) years.					
New establishments and departments have been	3.6%	4.4%	5.8%	52.6%	33.6%
added in the organization in the last four (4) years.					
Many new innovative services and applications	4.4%	5.9%	5.9%	52.9%	28.7%
have been introduced in the organization in the last					
four (4) years.					
The working relations and motivation are very high	4.4%	3.7%	6.7%	42.2%	43.0%
in the organization in the last four (4) years.					
The organization is enjoying increasing number of	5.1%	28.7%	18.4%	33.8%	14.0%
clients in the last four (4) years.					
The organization has been practicing customer	5.1%	21.3%	12.5%	34.6%	26.5%
driven quality management in the last four (4)					
years.					
There exists continuous benchmarking service	33.1%	33.1%	14.0%	14.7%	5.1%
performance in the organization in the last four (4)					
years.					

Table 4.23 indicate that 57.0% of the population interviewed disagreed that the organization has experienced high business growth in the last four (4) years. 86.2% of

the respondents agreed that new establishments and departments have been added in the organization in the last four (4) years. 81.6% agreed that many new innovative services and applications have been introduced in the organization in the last four (4) years. 85.2% agreed that the working relations and motivation are very high in the organization in the last four (4) years. 47.8% of the population interviewed agreed that the organization is enjoying increasing number of clients in the last four (4) years. 61.1% agreed that the organization has been practicing customer driven quality management in the last four (4) years. On the last statement of this variable, 66.2% of the total population interviewed disagreed that there exists continuous benchmarking service performance in the organization in the last four (4) years.

#### 4.9 Correlation Analysis of Independent Variables

Correlation analysis shows the strength of relationship between variables. In this study, Pearson product moment correlation coefficient was used to establish the relationship between the predictor variables. The correlation coefficients are summarized in Table 4.24. The findings also reveal that there was some significant relationship between the independent variables but not all since p-values in some cases were less than 0.01 that is p- values 0.000 <0.01 while in other cases was no significant relationship between the predictor variables, relationship in some cases there was no problem of multicollinearity did since where there was significant relationship the r-values were less 0.8 as suggested by Tabachnick and Fidel (2001). This was in agreement with VIF values as discussed earlier.

Table	4.24:	Correlation	Analysis	of	Independent	Variable	without	Moderator
(EEE)								

		Research Market	Working relations	Communication	Harmonization
Research	Pearson	1	.611**	.415**	051
Market	Correlation				

	Sig. (2-tailed)		.000	.000	.663
	Ν	75	75	75	75
	Pearson	.611**	1	.486**	124
Working	Correlation				
relations	Sig. (2-tailed)	.000		.000	.288
	Ν	75	75	75	75
	Pearson	.415**	.486**	1	123
Communication	Correlation				
Communication	Sig. (2-tailed)	.000	.000		.295
	Ν	75	75	75	75
Harmonization	Pearson	051	124	123	1
	Correlation				
	Sig. (2-tailed)	.663	.288	.295	
	Ν	75	75	75	75

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

# 4.10 Multicollinearity Test using Variance Inflation Factor (VIF)

On the other hand Variance Inflation Factor (VIF) and Tolerance values may also be used to test the multicollinearity. VIF values greater than 1 suggest that multicollinearity may be biasing the regression model Bowerman and Connell (1990) but tolerance value below 0.2 are worthy of concern. Tolerance value may be described as the reciprocal of VIF.

Table 4.25: Multicollinearit	y Test using V	Variance Inflation	Factor (VIF)
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Collinearity Statistics						
Tolerance	VIF					
.165	6.045					
.106	9.431					
.214	4.675					
.961	1.041					

According to the findings in Table 4.25, the tolerance values were very far above 0.2 for the regression model. This therefore suggests that there was no multicollinearity problem for the two regression model.

#### **4.11 Test for Autocorrelation (Independent of Errors)**

The assumption is that for any observations the residual terms should be uncorrelated (independent). This assumption was tested using the Durbin- Watson test which tests for serial correlations between errors. It tests whether the adjacent residuals are correlated. A value of two means the residuals are uncorrelated, a value greater than two indicates a negative correlation between adjacent residuals, whereas a value below two indicates a positive correlation (Field, 2009). However Durbin-Watson statistical values less than 1 or greater than 3 are definitely cause for concern. In this study the Durbin-Watson statistical values was 2.09 the findings suggest that the residual terms were independent.

#### 4.12 Regression Analysis

# **4.12.1** Objective one: To analyze the effects of Market Research on the adoption of human resource information systems in NHIF operations in Kenya

The objective was tested using the hypothesis which states that;  $H_{0:}$  There is no significant association between Market Research and adoption of human resource information systems in NHIF operations, Kenya. The test was conducted using the linear regression model. First is the model summary showing the correlation (R) and the coefficient of determination R square. The degree to which two or more predictors(X) are related to the dependent(Y) variable is expressed in the correlation coefficient R, and in multiple regressions the R square value can assume values between 0 and 1.0. The R-square is an indicator of how well the model fits the data. An R- square value which is close to 1.0 indicates that the dependent variable entirely depends on the independent variables while a value close to 0 indicates no correlation between the explanatory variables and the dependent variable (Ming'ala, 2002). Table 4.26 shows the regression analysis findings between Service performance and Market Research.

# Table 4.26: Regression Analysis for Market Research and Service Performance Model Summary

Model	R	R Square	Adjusted R	Std. Error of the	Durbin-Watson
			Square	Estimate	
1	.693 <sup>a</sup>	.481	.474	1.73139	2.264

a. Predictors: (Constant), Market Research

b. Dependent Variable: Service Performance

From the Table 4.26, the value of R- square value was 0.474. This implied 47.4% of Service Performance is explained by Market Research. This finding concurs with Drucker (2007) who confirms market research and service performance are closely related that one can explain the other.

#### **ANOVA** (Analysis of Variance)

This finding was further illustrated in the Analysis of Variance Table 4.27. Where, the p-value was 0.000 which was less than 0.05 showing that there was significant relationship between Service Performance.

Model		Sum of	df	Mean Square	F	Sig.
		Squares				
	Regression	202.753	1	202.753	67.636	.000 <sup>b</sup>
1	Residual	218.834	73	2.998		
	Total	421.587	74			

 Table 4.27: ANOVA for Market Research (X1)

a. Dependent Variable: Service Performance (Y)

b. Predictors: (Constant), Market Research X<sub>1</sub>

From the coefficient Table 4.28 t- test was also used to test the relationship between the predictor variable Market Research and Service Performance and from the finding, there was significance relationship between the two variables since the p-value= 0.000 < 0.05 for model. The regression model between Service Performance and Market Research can be expressed as; Y=17.942+ 2.081X<sub>1</sub>. The model indicates that for every unit of Market Research, service performance value changes by 0.563 which is in an agreement with Narayanan (2009) and Czinkota and Kotabe (2009).
Model Unstandar		lardized	Standardized	Т	Sig.	Collinearity	Į	
		Coeffi	icients	Coefficients			Statistics	
		В	Std.	Beta			Tolerance VI	IF
			Error					
1	$\mathbf{X}_1$	17.942	1.128		15.907	.000	)	
1		2.081	.253	.693	8.224	.000	1.000 1.0	00

 Table 4.28: Coefficientsa for Market Research (X1)

a. Dependent Variable: Service Performance

From the aforesaid, the nullhypothesis is rejected and we accept the alternative hypothesis and conclude that Market Research has significant influence on Service Performance. With reference to the studies carried out by Narayanan (2009) and Czinkota and Kotabe (2009), the null hypothesis was rejected which gives the current study the authority to affirm that the alternative hypothesis carries the day.

# 4.12.2 Objective two: To establish the effects of working relations on the adoption of human resource information systems in NHIF operations in Kenya

The objective was tested by hypothesis two which states that;  $H_0$ : There is no association between Working relations and Service Performance at NHIF. The Pearson's product moment correlation statistic was used to test the relationship between the Working relations and Service Performance. The R square value for the model was 0.377 showing that (37.7%) of Service Performance was explained by Working and the model was significant at 0.05 level of significant. In his study on the National Hospital Insurance Fund Mission in Nairobi, Arasa (2009), found out that 39.7% of service performance was explained by the model which is a slight departure from the current study. This means therefore that the current study is in conformity with some of the past studies and the R – square is valid.

Model	R	R Square	Adjusted R Std. Error of the		Durbin-Watson
			Square	Estimate	
1	.614 <sup>a</sup>	.377	.368	1.89755	2.219

Table 4.29: Model Summary for Working relations (X2) and Service Performance

a. Model (Constant) Working relations X<sub>2</sub>

a. Dependent Variable: Service Performance

# **ANOVA (Analysis of Variance)**

From the Analysis of Variance (ANOVA) shown in Table 4.30, it is clear that the model was significant with p-value of 0.00 which was less than 0.05. Statistically this means that there was a significant relationship between Working relations and Service Performance.

# Table 4.30: ANOVA a for Working Relations (X2)

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	158.735	1	158.735	44.084	.000 <sup>b</sup>
1	Residual	262.852	73	3.601		
	Total	421.587	74			

b. Dependent Variable: Service Performance

c. Predictors: (Constant), Working RalationshipX2

## **Coefficient:** Working relations (X<sub>2</sub>)

The regression coefficient table also shows that p- value of 0.000 was recorded and it was less than 0.05, level significance. The model generated from the coefficient table was expressed as

Y=13.939+0.461X<sub>2</sub>

Model		Unstan	dardized	Standardized	Т	Sig.	Collinea	rity
Coe		Coeff	ficients	Coefficients			Statistics	
		В	Std. Error	Beta			Tolerance	VIF
1		18.179	1.357		13.395	.000		
1	X2	2.071	.312	.614	6.640	.000	1.000	1.000

### Table 4.31: Coefficientsa for working relations (X2

a. Dependent Variable: Service Performance (Y)

From the linear regression analysis it was conclusively decided that there was significant relationship between Working relations and Service Performance. This as indicated in Table 4.31 and hence the null hypothesis was rejected and the alternative adopted that there is significant statistical effect of working relations on Service Performance. Arasa (2009) in the study of National Hospital Insurance Fund Mission and Charnes *et al.* (1978), as cited by Haksever *et al.* (2006) in the study of Measuring Efficiency of Decision Making Units concurred with the findings of the current study.

# 4.12.3 Objective Three: To analyze the effects of communication on the service performance

This objective was tested using hypothesis three, that; there is no association between communication and Service Performance in NHIF operations in Kenya. To test the hypothesis linear regression model was used as shown in Table 4.32. The coefficient

determinant (R- square) was 0.249. This therefore implies Communication explained at least 24.9% of variability of Service Performance.

Table 4.32: Communication	$(X_3)$ and	Service	Performance
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Model	R	R Square	Adjusted R Std. Error of the		Durbin-Watson
			Square	Estimate	
1	.499 <sup>a</sup>	.249	.239	2.08247	2.162

a. Predictors: (Constant), communication X<sub>3</sub>

b. Dependent Variable: Service Performance (Y)

# **ANOVA: (Analysis of variance) Communication**

Analysis of Variance results for regression coefficients revealed that p -values was 0.000 which was less than 0.05 hence the null hypothesis was rejected. The implication was that there was a significant relationship between Communication and Service Performance. This is as shown in Table4.33.

 Table 4.33: ANOVAa for Communication (X3)

Model		Sum of	df	Mean Square	F	Sig.
		Squares				
	Regression	105.009	1	105.009	24.214	.000 <sup>b</sup>
1	Residual	316.578	73	4.337		
	Total	421.587	74			

b. Dependent Variable: Service Performance (Y)

c. Predictors: (Constant), communicationX<sub>3</sub>

### Coefficient

The coefficient regression equation between Communication and Service Performance can be expressed as  $Y = 19.938 + 1.677X_3$  from the coefficient Table 4.34. The p-value was 0.000 which was also less than 0.05. This further implies that there was a significant relationship between Communication and Service Performance.

Model		Unstandardized		Standardized	t	Sig.	Collinea	rity
		Coefficients		Coefficients			Statistics	
		В	Std. Error	Beta			Tolerance	VIF
1	(Constant)	19.938	1.469		13.569	.000		
	X3	1.677	.341	.499	4.921	.000	1.000	1.000

 Table 4.34: Coefficient for communication (X3)

a. Dependent Variable: Service Performance (Y)

From the analysis above it was therefore concluded that the third null hypothesis be rejected and the alternative be accepted; there is a significant relationship between Communication and Service Performance which is also harmonized by Laudon and Laudon (2010) and Fitzsimmons and Fitzsimmons (2008) in their study on communication and service performance.

# 4.12.4 Objective Four: to analyze the effects of Harmonization on the Service Performance

This objective was tested using hypothesis three, that; there is no association between communication and Service Performance in NHIF operations in Kenya. A simple regression analysis was conducted to establish the relationship between the harmonization and service performances.

Model	R	R Square	Adjusted R	Std. Error of the	Durbin-Watson
			Square	Estimate	
1	.408 <sup>a</sup>	.166	.155	2.19405	2.183

Table 4.35: Harmonization (X4) and Service Performance

a. Predictors: (Constant), harmonization X<sub>4</sub>

b. Dependent Variable: Service Performance (Y)

From Table 4.35, R- square value of 0.166 indicated that 16.6% of service Performance was explained by harmonization. Laudon and Laudon (2010) affirmed that Customer satisfaction should be aligned with the services in order to maximize on the performance of the enterprise which also is in an agreement with Zeithaml and Bitner (2007) study.

### **ANOVA** (Analysis of Variance)

The F-statistics presented in Table 4.36 indicated that the overall model was significant, that is, the independent variable, harmonization was a good joint explanatory for Service Performance with F-value of 14.578. P- Value =0.000<0.05 also indicates that the model was fit.

Model		Sum of	df Mean Square		F	Sig.
		Squares				
	Regression	70.176	1	70.176	14.578	.000 <sup>b</sup>
1	Residual	351.411	73	4.814		
	Total	421.587	74			

 Table 4.36: ANOVA for harmonization (X4)

a. Dependent Variable: Service Performance (Y)

b. Predictors: (Constant), harmonization X<sub>3</sub>

The regression results indicated in Table 4.36 suggest further that there was a positive and significant relationship between harmonization and Service Performance. From the regression model every unit change in harmonization, service Performance changes by 1.032units. The regression model between harmonization and Performance is expressed as  $Y=22.254+1.032X_3$ 

Table 4.37: Coefficient for Harmonization (X<sub>4</sub>)

Model		Unstandardized		Standardized	t	Sig.	Collinearity	
		Coefficients		Coefficients			Statistics	
		В	Std. Error	Beta			Tolerance	VIF
1	(Constant)	22.254	1.287	-	17.291	.000	-	
	X3	1.032	.270	.408	3.818	.000	1.000	1.000

a. Dependent Variable: Service Performance (Y)

Again From the finding IN Table 4.37, the null hypothesis was rejected and the alternative was accepted that is there is a significant relationship between harmonization

and Service Performance. This is in accordance with the studies done by Laudon and Laudon (2010); Fitzsimmons and Fitzsimmons (2008) Zeithaml and Bitner (2007) who rejected their null hypothesis and the alternative hypothesis carried the day.

## 4.13 Multiple Linear Regressions

The main objective of the study was to investigate the overall effect of all the independent (Market Research, Working relations, Communication, and harmonization) variables on the dependent variable (Service performance).

### Table 4.38: Multiple Linear Regression model summary

Model	R	R Square	Adjusted R	Std. Error of the	Durbin-Watson
			Square	Estimate	
1	.830 <sup>a</sup>	.689	.671	1.36968	2.091

a. Predictors: (Constant), harmonization X<sub>4</sub>

b. Dependent Variable: Service Performance (Y)

From the summery model, it was clear that 68.9% of organization performance was explained by the independent variables collectively. The values also suggest that there was strong positive linear relationship between independent variables and dependent variables. Table 4.38 shows the summary of the finding.

Model		Sum of	df	Mean	F	Sig.
		Squares		Square		
	Regression	290.266	4	72.567	38.681	.000 <sup>b</sup>
1	Residual	131.321	70	1.876		
	Total	421.587	74			
Dependent Variables	Service perfe	ormance				
Predictors:(Constant	), Model 1: M	larket Resear	ch, Wo	rking relatio	ons, Comn	nunication,
and harmonization						

Table 4.38: Overall Analysis of Variance (ANOVA)

The ANOVA results Table 4.38 Suggests that the model was fit with significant values of 0.000, F-value 38.681with (4, 70) degrees of freedom. This implies that Market Research, Working relations, Communication, and harmonization have significant and positive collective effect on Service performance.

# Table 4.39: Overall Coefficient Table between Dependent Variable andexplanatory variables

Model		Unstandardized		Standardized	t	Sig.	Collinearity	
		Coef	fficients	Coefficients			Statisti	ics
		В	Std. Error	Beta			Tolerance	VIF
1	(Constant)	12.386	1.370		9.043	.000		
I	Market Research	1.906	.492	.635	3.874	.000	.165	6.045
	Working	.914	.691	.271	1.321	.021	.106	9.431
	relations							
	Communication	.683	.485	.203	1.409	.003	.214	4.675
	Harmonization	1.136	.172	.449	6.600	.000	.961	1.041

a. Dependent Variable: Service Performance (Y)

b. Predictors: Market Research, Working relations, Communication, and harmonization

The overall model shown in Table 4.39 indicates that Market Research, Working conditions, Communication, and harmonization were highly significant at individual level with p-values less than 0.05. The findings further confirms that the entire null hypothesis were rejected hence there was significant relationship between dependent variable and independent variables. The fitted model was:  $Y = 12.386 + 1.906X_1 + 0.914X_2 + 0.683X_3 + 1.136X_4$ .

			<u>.</u>	
	Hypothesis Tested	t	<b>P-values</b>	Decision
	$H_0: \beta_1 = 0$	3.874	.000	Reject H <sub>0</sub>
Hypothesis1				
	$H_1: \beta_1 \neq 0$			
	$H_0:\beta_2=0$	2.321	.021	Reject H <sub>0</sub>
Hypothesis2				
	$H_1:\beta_2\neq 0$			
	$H_0:\beta_3=0$	3.409	.003	Reject H <sub>0</sub>
Hypothesis3				
	$H_1:\beta_3=0$			
	$H_0:\beta_4=0$	6.600	.000	Reject H <sub>0</sub>
Hypothesis4				
	$H_1: \beta_4 = 0$			

Table 4.40: Summary of Hypothesis Testing

From the findings all the hypothesis were rejected and the overall model was significant at 5% level of significant as shown in Table 4.40. Using the same significant level of 5%, Laudon and Laudon (2010); Fitzsimmons and Fitzsimmons (2008) Zeithaml and Bitner (2007); Arasa (2009) and Charnes *et al.* (1978), as cited by Haksever *et al.* (2006) rejected all the null hypothesis that were being tested in the most similar study to the current study and therefore, the researcher can confirm that the market research, working relations, communication and harmonization have significant influence on the service performance.

### **4.14 Model Fit Summary**

Goodness of fit for the model was also generated using fit indices such as: Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI) and Root Mean Square Error of Approximation (RMSEA) which are widely used as suggested by Moss (2009), In this study, CFI, GFI, AGFI and RMSEA were used to test whether the overall models was good enough. In the current study, Comparative Fit Index (CFI) was used because it is a fit index which is least affected by sample size and it takes into account a sample size that performs well even if the sample size is small (Tabachnick & Fidell, 2013). The value for this statistics ranges between 0 and 1. Values closer to 1 indicate a good fit. in this study CFI Values were closer to 1. In addition to that, Goodness of Fit Index- GFI was also adopted in this study. It is used to measure the amount of variance and covariance in the observed correlation matrix. Values between 0.9 and 1 are acceptable (Arbuckle &Wothke, 1999).

Again GFI values were falling between 0.9 and 1 showing good result. Apart from the already discussed Goodness of fit indices, adjusted goodness of fit index (AGFI) is another version of GFI which corrects GFI affected by the number of indicators of each latent variable. The values of AGFI range between 0 and 1 and for a good fit, value must be 0.9 and above.

Table 4.41 Model Fit Summary
------------------------------

	MODEL	CFI	GFI	AGFI	RMSEA
1	Default model	1.000	0.979	0.945	0.060
	Saturated model	1.000	1.000		
W1thout moderator	Independence model	0.000	0.000	0.002	0.123

The results for the current study are summarized in Table 4.41. Lastly Root Mean Square Error of Approximation (RMSEA) also shows how inappropriate the model fits the data by considering the error in the Approximation. RMSEA Values less than 0.1 are allowed (Byrne, 2001; Shahadan & Zakaria, 2012). Table 4.41 is a befitting indication that all the model fits met the required threshold value.

### **CHAPTER FIVE**

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

# **5.1 Introduction**

The summary of the study are presented in this chapter as guided by the specific objectives. These are followed by conclusions and recommendations. The chapter finally gives direction on areas of further research.

## 5.2 Summary of Findings

The general objective of the study was to determine the performance of the NHIF's designated health care service providers in Kenya. The study relied on theoretical and empirical studies on performance and consequently developed a conceptual model of the relationship between the predictors and the dependent variable. The hypothesized relationships were then tested empirically. Prior to the empirical test, certain assumptions about the variables used in the analysis were tested for, since most statistical tests rely upon them. The study also found no violation of the assumptions of normality, heteroscedasticity, multicollinearity, linearity, outliers, and non-response bias.

# **5.2.1To determine the influence of market research on service performance of the NHIF designated health care service providers in Kenya.**

The objective was tested using the hypothesis which states that;  $H_{0:}$  There is no significant association between Market Research and adoption of human resource information systems in NHIF operations, Kenya. The test was conducted using the linear regression model. First is the model summary showing the correlation (R) and the coefficient of determination R square. The degree to which two or more predictors(X) are related to the dependent(Y) variable is expressed in the correlation coefficient R, and

in multiple regressions the R square value can assume values between 0 and 1.0. The R-square is an indicator of how well the model fits the data. An R- square value which is close to 1.0 indicates that the dependent variable entirely depends on the independent variables while a value close to 0 indicates no correlation between the explanatory variables and the dependent variable (Ming'ala, 2002). Table 4.23 shows the regression analysis findings between Service performance and Market Research. From the table 4.23 above, the value of R- square value was 0.474. This implied 47.4% of Service Performance is explained by Market Research. This finding concurs with Drucker, (2007) who confirms market research and service performance are closely related that one can explain the other. This finding was further illustrated in the Analysis of Variance table 4.24 below. Where, the p-value was 0.000 which was less than 0.05 showing that there was significant relationship between Service Performance.

From the coefficient table 4.25 t- test was also used to test the relationship between the predictor variable Market Research and Service Performance and from the finding, there was significance relationship between the two variables since the p-value= 0.000 < 0.05 for model. The regression model between Service Performance and Market Research can be expressed as; Y=17.942+ 2.081X<sub>1</sub>. The model indicates that for every unit of Market Research, service performance value changes by 0.563 which is in an agreement with Narayanan (2009) and Czinkota and Kotabe (2009).

From the aforesaid the null hypothesis is rejected and we accept the alternative hypothesis and conclude that Market Research has significant influence on Service Performance. With reference to the studies carried out by Narayanan (2009) and Czinkota and Kotabe (2009), the null hypothesis was rejected which gives the current study the authority to affirm that the alternative hypothesis carries the day. From the foregoing, it can be concluded therefore that there is significant association between Market Research and adoption of human resource information systems in NHIF operations, Kenya and thus market research has an influence on the service performance.

# 5.2.2To determine the influence of market research mediated by working relations on service performance of the NHIF designated health care service providers in Kenya

The objective was tested by hypothesis two which states that; H<sub>0:</sub> There is no association between Working relations and Service Performance at NHIF. The Pearson's product moment correlation statistic was used to test the relationship between the Working relations and Service Performance. The R square value for the model was 0.377 showing that (37.7%) of Service Performance was explained by Working and the model was significant at 0.05 level of significant. In his study on the National Hospital Insurance Fund Mission in Nairobi, Arasa (2009), found out that 39.7% of service performance was explained by the model which is a slight departure from the current study. This means therefore that the current study is in conformity with some of the past studies and the R – square is valid. From the Analysis of Variance (ANOVA) shown in table 4.27, it is clear that the model was significant with p-value of 0.00 which was less than 0.05. Statistically this means that there was a significant relationship between Working relations and Service Performance. The regression coefficient table also shows that p- value of 0.000 was recorded and it was less than 0.05, level significance. The model generated from the coefficient table was expressed as  $Y=13.939+0.461X_2$ . From the linear regression analysis it was conclusively decided that there was significant relationship between Working relations and Service Performance, hence the null hypothesis was rejected and the alternative adopted that there is significant statistical effect of working relations on Service Performance. Arasa (2009) in the study of National Hospital Insurance Fund Mission and Charnes et al. (1978), as cited by Haksever et al. (2006) in the study of Measuring Efficiency of Decision Making Units concurred with the findings of the current study. Therefore, working relations has influence on the performance.

# 5.2.3 To establish the effect of working relations mediated by communication on service performance of the NHIF designated health care service providers in Kenya

This objective was tested using hypothesis three, that; there is no association between communication and Service Performance in NHIF operations in Kenya. To test the hypothesis linear regression model was used. The coefficient determinant (R- square) was 0.249. This therefore implies Communication explained at least 24.9% of variability of Service Performance. Analysis of Variance results for regression coefficients revealed that p -values was 0.000 which was less than 0.05 hence the null hypothesis was rejected. The implication was that there was a significant relationship between Communication and Service Performance. The coefficient regression equation between Communication and Service Performance can be expressed as  $Y = 19.938 + 1.677 X_3$ . The p-value was 0.000 which was also less than 0.05. This further implies that there was a significant relationship between Communication and Service Performance. From the analysis above it was therefore concluded that the third null hypothesis be rejected and the alternative be accepted; there is a significant relationship between Communication and Service Performance which is also harmonized by Laudon (2010) and Fitzsimmons & Fitzsimmons, (2008) in their study on communication and service performance.

# 5.2.4 To establish the effect of working relations mediated by harmonization on service performance by the NHIF designated health care service providers in Kenya

This objective was tested using hypothesis three, that; there is no association between harmonization and Service Performance in NHIF operations in Kenya. A simple regression analysis was conducted to establish the relationship between harmonization and service performances. An R- square value of 0.166 indicated that 16.6% of service Performance was explained by harmonization. (Laudon & Laudon, 2010) affirmed that Customer satisfaction should be aligned with the services in order to maximize on the

performance of the enterprise which also is in an agreement with Zeithaml and Bitner (2007) study.

## **5.3** Conclusion

Based on the above findings, the study made the following conclusions: With regards to the first objective, t- test was used to test the relationship between the predictor variable Market Research and Service Performance and from the finding, there was significance relationship between the two variables since the p-value= 0.000 < 0.05 for model. The regression model between Service Performance and Market Research can be expressed as; Y=17.942+ 2.081X<sub>1</sub>. The model indicates that for every unit of Market Research, service performance value changes by 0.563. From the aforesaid the nullhypothesis is rejected and we accept the alternative hypothesis and conclude that Market Research has significant influence on Service Performance and hence the null hypothesis was rejected which gives the current study the authority to affirm that the alternative hypothesis carries.

Based on the second objective, the regression coefficient table shows that p- value of 0.000 was recorded and it was less than 0.05, level significance. The model generated from the coefficient table was expressed as  $Y=13.939+0.461X_2$ . From the linear regression analysis it was conclusively decided that there was significant relationship between Working relations and Service Performance, hence the null hypothesis was rejected and the alternative adopted that there is significant statistical effect of working relations on Service Performance.

On the third objective, the coefficient regression equation between Communication and Service Performance can be expressed as  $Y = 19.938 + 1.677X_3$ . The p-value was 0.000 which was also less than 0.05. This further implies that there was a significant relationship between Communication and Service Performance. From the analysis above it was therefore concluded that the third null hypothesis be rejected and the alternative be accepted; there is a significant relationship between Communication and Service Performance. With regard to the last objective, the study concluded that 16.6% of service Performance was explained by harmonization. (Laudon & Laudon, 2010) affirmed that Customer satisfaction should be aligned with the services in order to maximize on the performance of the organization.

### **5.4 Recommendations**

On the basis of this study, the following recommendations are made: From the study, it is evident enough that the better the knowledge that the employees have concerning a particular health care service provided by NHIF's designated health care service providers, the more it is practiced. On the basis of Market Research and Service Performance and from the finding, there was significance relationship between the two variables. The researcher recommends that the employees should be educated on market research putting more emphasis on its meaning, how it works and how it can benefit the organization. It could be seen that however less knowledge about this variable, it could still have positive impact on the performance so a little emphasis on it would do the organizations favor as far as their outcomes are concerned. In regard to Working relations and Service Performance there was significant relationship between the two and it seems that the organizations understood the meaning of the working relations and how it works and the relationship with performance is also positive. The extent of its positivity towards performance cannot go without mention. The study hence recommend that the variable should be enhanced wherever necessary and as much as possible for the benefit of the public.

There was a significant relationship between Communication and Service Performance. Due to the positive correlation with the performance and as such, the researcher recommends that NHIF's designated health care service providers in Kenya should embrace communication to improve on the performance. Customer satisfaction therefore should be aligned with the services in order to maximize on the performance of the organization.

## **5.5 Areas of Further Research**

The study on the performance of the NHIF's designated health care service providers in Kenya, concentrated on only four sub-variables. It was not possible to study all variables that determine the performance of NHIF. Without doubt, other variables come into the interplay and provide perceptive results to the issue influencing the performance of hospitals in Kenya. Secondly, the study relied mostly on survey where the respondents were asked to assess viewpoints on the item in the instrument. But some success factors of health care services are known to be strategic and dynamic in nature. Therefore, a longitudinal study would be more preferable as it could provide a better perspective. Lastly, the findings presented in this study are based on evidence gathered from designated health care service providers in Kenya. Future research should be extended to other institutions in other regions which may be facing the same problem.

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# **APPENDICES**

# **Appendix I: Letter of Introduction**

The researcher is a lecturer and a PhD candidate at Jomo Kenyatta University of Agriculture and Technology. The title of the study is "Determinants of Performance of National Hospital Insurance Fund's Designated Health Care Service Providers in Kenya"- (Kenyatta National Hospital, Nairobi Hospital, Aga Khan Hospital, MP Shah Hospital, and Mbagathi Hospital). The study is to investigate the determinants of service performance of National Hospital Insurance Fund's designated health care service providers in Kenya.

Designated health care service providers mentioned above and paid by tax payers, through NHIF, should be concerned with the efforts of obtaining results and in providing information to help determine what needs to be improved. Therefore, your participation and contribution to this study is very important and will be highly appreciated.

You are also assured that information you provide will only be used for academic purposes and will be strictly confidential.

The report of the study findings can be sent to you on request.

The researcher's address is provided below.

Thank you.

Isaac Mirenga

Jomo Kenyatta University of Agriculture and Technology,

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NAIROBI

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# **Appendix II: The Questionnaire**

# **Instructions/ Guidelines**

Please answer all Questions by putting a **tick** in the box that closely matches your views or alternatively, write on the space provided.

# PART A: General Information/Respondent's Personal Details

1. a) Name:		Address:	
b) Gender: Male	- Female:		
2. Job Title:			
3. Department served			
4. Current post held			
5. The number of years you have	worked for the	e organization:	

# PART B: Market Research and Organizational Data

To what extent do you agree or disagree with the following statements about your organization? Please use the key below to guide in marking the boxes.

KEY:	1 - Strongly	disagree. 2 -	- Disagree, 3 -	Neutral. 4 - Ag	ree, 5 - Strongly agre	e
	- Surving-j	ansagi ce, =	210451 00,0			•

	Statement	1	2	3	4	5
1	New ideas and approaches on work methods are continuously					
	brought in and encouraged by management.					
2	There is no official policy on research and development.					
3	The organization supports the employees in their effort to join					
	other formal or informal organizations and people outside for					
	networking.					
4	The organization is regularly in touch with its external					ĺ
	environment. and industry peer experts for benchmarking					
	purposes					
5	The organization does not articulate to members about the					
	vision, mission, goals, and objectives regularly.					
6	Meetings are held regularly to inform all employees about the					
	recent innovative and new methods and applications by the					l
	organization.					
7	There exists no formal mechanism for disseminating and					
	guaranteeing sharing of industry best practices in different					
	organization's departments and functions.					
8	There are formal mechanisms to ensure that all members of					
	the organization are availed and share the objectives to which					
	they are committed.					
9	For the purpose of sharing knowledge, work experiences and					1
	relations					ĺ
						ĺ
	The organization encourages and facilitates regular seminars					l
	for interaction of all cadres of employees.					ļ
10	The organization has instituted formal mechanisms for					ĺ
	creating employee awareness of the importance of other					l
	people, departments' activities and organization-wide					
1.1	communication.					
	There is a serious effort in the organization to ensure smooth					1
	working relations among all levels of employees and					ĺ
	management to ensure harmonization of all functions.					

1. What additional approaches would you suggest to enhance the efforts in marketing research to aid your institution's performance? .....

# **PART C: Working relations**

To what extent do you agree or disagree with the following statements about your organization? Please use the key below to guide in marking the boxes.

# Key: 1 – Strongly Disagree, 2 – Disagree, 3 –Neutral, 4 – Agree, 5 – Strongly Agree

	Statement	1	2	3	4	5
12	The organization emphasizes and enhances high interactive					
	actions among all employees.					
13	All departments and sections in the organization relate					
	harmoniously with each other.					
14	There is a high level of both internal and external customer					
	relationship culture in the organization					
15	There is a policy of interactive relationships connecting					
	market research, communication, Harmonization of roles and					
	tasks in the entire organization.					
16	There are regular meetings and seminars organized for					
	continuous assessment of organizational cohesiveness.					

2. What additional steps would you want to be done about working relations in the hospital?

.....

# **PART D: Performance**

For the following statements, use the key below to gauge your organization's performance record.

Kev•	1. Strongly	Disagree	2 - Disagree	3 – Neutral	$4 - \Delta \sigma ree$	5 – Strongly	<b>A</b> gree
IXCy.	1- Su ongiy	Disagi ee,	$\Delta = Disagi cc,$	3 - 11 cuti al,	, 4 – Agice,	, 5 – Subigly	Agice

	Statement	1	2	3	4	5
17	The organization has experienced high business growth in the					
	last four (4) years.					
18	New establishments and departments have been added in the					
	organization in the last four (4) years.					
19	Many new innovative services and applications have been					
	introduced in the organization in the last four (4) years.					
20	The working relations and motivation are very high in the					
	organization in the last four (4) years.					
21	The organization is enjoying increasing number of clients in					
	the last four (4) years.					
22	The organization has been practicing customer driven quality					
	management in the last four (4) years.					
23	There exists continuous benchmarking service performance in					
	the organization in the last four (4) years.					

3. In your view are standard procedures, service sequence, physical facilities, and outcome to patients good?

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4. What would you suggest to the management of the hospital to empower every employee to improve performance?

.....

# **PART E:** Communication

To what extent do you agree or disagree with the following statement about your organization? Please use the key below to guide in marking the boxes.

# Key: 1- Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

	Statement	1	2	3	4	5
24	Organizational communication has positively influenced					
	employee attitudes, commitment to service performance.					
25	Communication has enhanced work relations between					
	employees for better customer service performance.					
26	The level of communication between departments, employees					
	and management is at best for service performance.					
27	The organizational alignment and harmonization has been					
	emphasized regularly and communicated for better service					
	performance.					

5. Are interactions and communication between the customers and service personnel adequate and monitored regularly?.....

.....

# **PART F: Harmonization**

To what extent do you agree or disagree with the following statements about your organization? Please use the key below to guide you in marking the boxes.

Kev:	1- Strongly	Disagree, 2	- Disagree. 3	– Neutral, 4 –	- Agree, 5 –	<b>Strongly Agree</b>

	Statement	1	2	3	4	5
28	The organization insists on harmonization of all tasks and					
	roles in the process of service delivery and outcome of the					
	service					
29	The organization has enhanced reliability to perform service					
	dependable and accurately at all times.					
30	All employees of the organization are responsive, willing to					
	help clients and to provide prompt services all the time.					
31	The organization ensures that all employees possess					
	knowledge, courtesy, ability to convey trust and confidence to					
	assure clients.					
32	All employees are aligned and harmonized to care, and pay					
	individual					
	Attention to clients through approachability, sensitivity, and					
	understanding their needs.					
33	The physical facilities in the organization, equipment,					
	personnel, and communication materials are modern.					

6. Are regular peer reviews formally carried out among all service personnel to

harmonize service provision?.....

.....

.....

.....

# **PART G: Measuring Performance**

Service performance often extends beyond the immediate encounter. As in the case of health care services offered by the NHIF designated health care service providers, the service has an impact on a person's and the entire nation's future quality of life.

8. What suggestions would you, personally, make to improve the service performance of your hospital?

.....

9. Do you think that the health care service provider is consistent on value service delivery?

.....

10. In your view, is the health care service provider maintaining top quality service standards?

.....

11. What would you personally suggest to the health care service provider to do to maintain good service recovery?

.....

.....

12. In your opinion are customers of the hospital satisfied?

.....

13. Are there regular complaints about a particular aspect of the service in your hospital?

.....

Thank you for your corporation