# EFFECT OF INFORMATION COMMUNICATION TECHNOLOGY OUTSOURCED INNOVATIONS ON CUSTOMER SATISFACTION IN THE SERVICE INDUSTRY, NAIROBI KENYA

BY

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## A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTERS OF BUSINESS ADMINISTRATION DEGREE IN PROCUREMENT IN THE SCHOOL OF BUSINESS AND PUBLIC MANAGEMENT AT KCA UNIVERSITY

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## DECLARATION

I declare that the work in this dissertation has not been previously submitted in any institution for award of a degree.

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## APPROVAL

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#### ABSTRACT

In IT outsourcing, customer satisfaction is very important to enhance continuation and maintenance of long term relationships however a successful outsourcing relationship will be one that clients stick with for many years. The general objective of this study was to analyses the effect of information communication technology outsourced innovations on customer satisfaction in the service industry, Nairobi Kenya. This study was guided by three specific objectives; to assess the effect of after sale service innovations on customer satisfaction in the service industry; to analyse the effect of 24-hour help desk innovation services on customer satisfaction in the service industry and to find out the effect of internet network innovations on customer satisfaction in the service industry. The study will give out sourcing organisations an insight as to reasons why the company is not reaping the intended benefits from ICT outsourcing. This will enable the organisations to take appropriate measures to ensure that the company reaps the benefits of ICT outsourcing. The study adopted a descriptive research design. The population of interest of this study was all firms in the service sector, operating in Nairobi Central Business District that outsource the ICT services. The population of the study included all 1202 registered businesses operating in the service sector segment. From the population of 1202, the study took 33.3% of the population of the entire population. In total, the sample size for this study was 400 firms. This study utilized a questionnaire to collect primary data from the sample size selected. Data collected was quantitative in nature which was coded to enable the responses to be grouped into various categories. Quantitative data was summarized using descriptive statistics. SPSS (Version 21) was used to analyse the data. Inferential statistics were used to generate a Linear Regression Model. From the findings, efficient after sale service innovations positively affect customer satisfaction in any organization. The study therefore concludes that customers will be more satisfied with after sale services that are innovative enough hence making it easier to solve problems that may arise after installing of services. The findings also revealed that an efficient 24-hour help desk service can positively influence customer satisfaction. The study concludes that a toll free 24-hour desk help service that's is easy to use and with not communication breakdown would go a long way in helping address the customers issues regardless of the time. The study recommends that ICT service providers should ensure they are more innovative in the service offering by trying to provide integrated solutions to their clients. Also, instead of having a one-time form of solution, the ICT service providers should come up with ways of working which are more of mindset and sustainable to the firms. This will go a long way in helping the firms reap the full benefits of outsourcing the ICT services. There is need for the ICT service providers to ensure that the interaction with customers at the help desk is such that the customer's needs are understood and solutions are provided. This is because customer care is very vital to any organization. Customers who are not given an opportunity to business can do damage to the organization just by the word of mouth, because of influence they have on the existing potential customers. Therefore, existing customer need to be satisfied with the services offered by an organization.

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## **DEDICATION**

I thank the Almighty God for his protection, love, care, guidance and blessing me with sound mind throughout this dissertation.

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## LIST OF ABBREVIATIONS

CEOs:	Chief Executive Officer
CIOs:	Chief Information Officer
EAA:	East African Airways Corporation
GE:	General Electric
IBM:	International Business Machines
IT:	Information Technology
ITO:	Information Technology Officer
NAB:	National Australia Bank
SPSS:	Statistical Package for the Social Sciences
US:	United States
UTAUT:	Unified Theory of Acceptance and Use of Technology

## **DEFINITION OF TERMS**

- 24-Hours Help-Desk: In an IT context, 24/7 support means a support service that is provided 24 hours a day and 7 days a week. This support generally includes support for those services that require running without disruption and downtime (Ahlan, 2013).
- After Sale Service Innovation: This transformation is occurring through field service innovations, predictive service platforms, and connected products. Increasingly, servicing product after the initial sale is having a positive impact on product manufacturer's revenue (Brown, 2015).
- Customer Satisfaction: Customer satisfaction is a marketing term that measures how products or services supplied by a company meet or surpass a customer's expectation. Customer satisfaction is important because it provides marketers and business owners with a metric that they can use to manage and improve their businesses (Dahlberg, 2016).
- **Information communication(ICT):** This is the role of unified communications and the integration of telecommunications computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information (Nawak, 2013).
- Internet Network: Internet network is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet (Flecker, 2014).

- Outsourcing: Outsourcing is a practice used by different companies to reduce costs by transferring portions of work to outside suppliers rather than completing it internally. Outsourcing is an effective cost-saving strategy when used properly. It is sometimes more affordable to purchase a good from companies with than it is to produce the good internally (Sullivan, 2013).
- Service Innovation: It is used to refer to many things. These include but not limited to: Innovation in services, in service products new or improved service products. Often this is contrasted with technological innovation though service products can have technological elements (Keller, 2010).

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#### **CHAPTER ONE**

## **INTRODUCTION**

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

Information Communication Technology (ICT) is an umbrella term used to encompass all rapidly emerging, evolving and converging computer, software, networking, telecommunications, Internet, programming and information systems technologies (Gefen & Pavlou, 2012). Outsourcing ICT has to do with the whole information science, helping the business field. It is about networks, web design, programming and internet provision (Paraskevas & Buhalis, 2012). Network services is the most common ICT services activity that is being outsourced and that outsourcers who do not comply with contract has the most influence on ICT outsourcing inherent risks.

Since gaining popularity in the late 1980s, the IT outsourcing market has continued to grow and has captured a large market share. In 2012 survey by Fathers, 60 percent respondents agreed that it's a waste to have in-house information technology team, increased from 38 percent in 2010 (Fathers 2012). Global outsourcing market is predicted to generate 425 billion USD by 2018 (Qi & Chau 2015), IT outsourcing appears to be a lucrative business for vendors. However, as IT outsourcing strategy moves beyond national boundaries, competition among vendors become stiffer. To ensure contract continuation, vendors strive very hard to provide the best quality of products and services so that they will meet customer expectation (Wong, 2011) and retain customer satisfaction (Auh & Johnson, 2015).

Globally Kodak, was among first companies to outsource the bulk of their IT functions in October 1989. The company outsourced the bulk of their data centre operations to IBM in an

initial US\$250 million deal that was originally scheduled to run for a 10-year span (Patton, 2011). It was a momentous occasion for Kodak and dozens of other large companies would soon follow the film giant's lead. Kodak's deal set the stage for massive outsourcing negotiations with vendors such as IBM and EDS, and brought about a basic change in the way corporates in America approached IT. Suddenly CEOs were paying more attention to core competencies, cost saving and strategic partnerships with their IT vendors. Service quality was also an important factor (Patton, 2011). Because of the success of the Kodak outsourcing agreement of 1989, multi-sourcing has become an integral part of the IT industry.

General Electric (GE) also became a business leader in the outsourcing arena. In the early 1990s Jack Welch, then CEO of GE, introduced a new rule that governed GE's offshore actions called 'the 70:70:70 rule' (EBS, 2012). Welch mandated that 70% of GE's IT work would be outsourced. Out of this, 70% of that work would be completed from offshore development centres and from that, about 70% would be sent to India. This has resulted in a total of about 30% of GE's work being outsourced to India (Sople, 2010). Currently, offshore ICT outsourcing to India receives the most press but other countries such as Poland, Ireland and Israel are just as prominent.

In Australia, national organisations such as National Australia Bank (NAB) and Telstra continue to outsource to offshore IT groups (Dibbern, 2014). BHP-Billiton and Shell Australia have transferred data centres and IT support to Malaysia and Singapore from Melbourne (Bhagowati, 2015). In simple terms, it is widely accepted that businesses regard Information Technology services as an overhead cost (Hirschheim & Lacity, 2010). Offshore and onshore outsourcing of IT support and development is a critical part of a globalized all across the globe. Companies have to manage the strategic implications of IT outsourcing and organisations are viewing IT as a commodity that can be outsourced to the lowest bidder (George & Wong, 2014). Baloh, Jha, Awazu (2011), Grimshaw & Miozzo (2011) and Wang (2013) point to the impact of IT outsourcing on the outsourcer's knowledge assets, performance and satisfaction.

The increasing trend to outsource is accompanied by the surge in the number of articles on the subject in business publications, scholarly journals and the popular press. Many researchers including Intriligator (2011); Gartner (2013), Lacity & Willcocks (2010), Sparrow et al. (2014) and Yourdon (2015) have highlighted the benefits of globalisation stemming from competition. According to Robinson and Kalakota (2014), 'If done well, outsourcing IT services can improve the bottom line and streamline the structure of an organisation'. The need to improve efficiency and effectiveness in organisations is one of the main driving forces for the development of IT outsourcing services (Dahlberg & Nyrhinen, 2012).

Lofgren and Witell (2011) stated that many past studies show that customer satisfaction on outsourced IT services remains low. According to a recent survey (Computer Economics 2012), only 19% of customers have positive experience with outsourcing services. Wilson and Brown (2012) noted that 60% of the clients are satisfied with their current vendors whereas Parker (2011) claimed that and up to 50% outsourcing relationships end up with failure. On top of the problems on stiff competition and low customer satisfaction, vendors also face the issue of limited resources and capabilities. Sustainable competitiveness and long-term profit of an organization depend not only on attracting new customers, but also on retaining existing customers (Auh & Johnson, 2013).

## 1.1.1 Information Communication Technology Out-Sourcing Service Providers

Outsourcing has emerged as one of the world's fastest growing business sectors with countries like India leading the pack by having between 5-6% global market share and generating revenues

of US\$ 14.9 Billion from offshore outsourcing and US\$ 40 Billion from IT and total outsourcing in 2013 (Gastwirth, 2013). The success of countries such as India, China and the Philippines in outsourcing has led to many other countries, including Kenya, investing substantial resources to develop their ICT outsourcing potential. Some of the largest ICT outsourcing vendors in the world are NSN (Nokia-Siemens), Ericsson, Huawei and Alcatel Lucent, to name a few. Local vendors include Safaricom Limited, Airtel, Orange and other small registered vendors. Safaricom and later Airtel formerly Zain have brought a new dimension to the industry, with the introduction of money transfer business. ICT vendors have to put all their efforts directed towards sustaining a competitive edge with the consistent delivery of innovative products (Keller, 2010).

The Kenyan Government has also introduced a raft of incentives to make investing in outsourcing businesses a very attractive proposition. In fact, outsourcing is underscored in Kenya recently unveiled Vision 2030 initiative as a key pillar and driver of social and economic improvement through job and wealth creation (Mohamed, 2016). Some of the key organizations that are driving the Kenya outsourcing agenda include the Kenya ICT Board, Kenya Business Processing and Contact Center Society, Export Processing Zones Authority, Communications Commission of Kenya and the Ministry of Information and Communications. In the outsourcing sector of the Kenyan economy, the largest amount of attention has been centered on call centers. Companies such as Kencall, Skyweb Evans and Ken-Tech Data are some of the better established and successful call centers in Kenya. Setting up a call center requires large financial resources, technical expertise and international business development (Huws, 2014).

Outsourcing allows management to defer the details to a specialized company (Berry, 2014). Removing the details, permits management to focus on the larger issues within the organization. Typically, the specialized company that handles the outsourced IT work boasts technological capabilities superior to the organization. Organizations view outsourcing as a cost-effective means to expand into other countries and new markets (Benner, 2016).

Outsourcing IT reduces or completely eradicates direct communication between organizations and clients (Gastwirth, 2013). Limited communication impedes the relationship building process, which may lead to the overall dissatisfaction of the organization and client. The outsourcing organization loses complete control over all areas of the company. Project implementation timelines may suffer as a result. If the organization terminates the agreement with the outsourced entity, confidential, sensitive information becomes jeopardized. Organizations that outsource IT services run a risk of receiving poor quality work. Offshore outsourcing sites often experience high employee turnover and may capitalize on the organization's limited technological capabilities, which leads to high-quality service being compromised. Outsourcing to foreign countries involves hidden costs, such as travel expenses and creating a infrastructure to manage operations. Companies that do not plan accordingly counteract the financial benefits of outsourcing (Flecker & Dahlmann, 2014).

#### 1.1.2 Service Sector in Kenya

Kenya has already become a major exporter of services in areas such as transport services, financial services and, less significantly, ICT (Kabagambe, 2012). The service sector is an important component of any country's economy. It makes a direct and significant contribution to GDP and job creation, and provides crucial inputs e.g. logistics, energy, financial or ICT services for the rest of the economy, thus having a significant effect on the overall investment climate, which is an essential determinant of growth and development. Some service sectors such as the

health, education, water and sanitation sectors are also directly relevant to achieving social development objectives (Kabagambe, 2012).

The IT enabled service sector has transformed many countries around the world including Kenya and other developing countries. The ODI (2014) report state that ICT and financial services in particular makes companies in other sectors more productive, help develop value chains and safeguard jobs, while tourism creates numerous jobs within suppliers. Further, services have an important role to play in the servicification of manufacturing. Kenya has a number of firms exporting high value off-shore services such as product development, research and development business ventures, insurance, accounting and BPO services. With the country increasingly concentrated on high-tech communication and technology services, exports in ICT services already account for more than 10 percent of total service exports and close to 20 percent of total foreign direct investment inflows (Kibera, 2015).

Kenya's service sector is the largest in the East African region and is much more dynamic than those of other member countries (Mohamed & Affandi, 2016). This has been brought about by more advanced human capital base, its more diversified economy, and its role as a leader in the information communication revolution in the region, Kenya's service sector is expected to remain strong, creating salutary benefits to the other East African countries. Going forward, as Kenya becomes more integrated in the global economy, it is bound to be exposed to external shocks through spillovers from trading partners' economies or volatility in international financial markets. Further bolstering its foreign reserve position and lowering its debt burden will ensure that the country is resilient to these shocks (Kibera, 2015). Some of the major sectors includes accounting, architectural, engineering, legal, and business process outsourcing (BPO), are strong emergent sectors. Apart from the BPO, other sectors that have been earmarked as having high potential are accountancy, engineering, information communications technology, information enabled services, the legal field, insurance, non-banking financial services and freight and forwarding. (Kishore, 2015).

At the political level, Kenya has not only overhauled its form of government by implementing the 2010 Constitution, but also gone through a delicate political transition a transition that culminated with the March 2013 peaceful elections (Kibera, 2015). Kenya's new system of checks and balances means that management of public resources is now more transparent and subject to more accountability. These changes should support overall economic stability. In addition, Kenya has fully embraced the opportunities afforded by technology in enhancing financial inclusion. This country now boasts the highest share of population with access to financial services in Sub-Saharan Africa (Kishore, 2015).

## 1.1.3 Customer Satisfaction Concept

A significant level of customer satisfaction is among the most critical indicators of the business's future (Asubonteng, 2013). Customers who are satisfied are also loyal and this ensures a consistent cash-flow for the business in the future. In addition, satisfied customers are often characterized as less-price sensitive and they are more partial to spend more on the products they have tried and tested before. Moreover, stability in business relations is also beneficial where the positive quality image minimizes the cost for a current customer (Matzler, 2011). According to Hom (2010), satisfaction refers to a feeling or a short-term attitude that can change owing to various circumstances. It exists in the user's mind and is unlike observable behaviors like product choice, complaint or repurchase.

In a related study, Linda (2012), investigated the relationship between expectations, performance and satisfaction. The findings revealed that when a customer judges the performance of a product, he usually compares a set of performance outcomes that are expectations. The product is then likely to be considered as dissatisfactory or satisfactory. In another related study, Johnson, (2015) developed and tested alternative models of market-level expectations, perceived product performance, and customer satisfaction. They revealed that in a particular period, satisfaction is positively impacted by performance and expectations where performance effects reveal the impact that experiences of the product or service have upon satisfaction and expectation effects reveal the impact that past performance information has upon satisfaction. They stated that managers inclined to maximize market satisfaction for the purpose of enhancing future profitability is better off investing in long-run quality improvement strategies and methods as short-term techniques only leads to temporary performance or benefits per customer and will be negligible in the long-run. Similarly, Sullivan (2013) examined the antecedents and outcome of firms' customer satisfaction and found that quality falling short of expectations have higher impact on satisfaction and retention compared to those exceeding expectations. They also revealed that satisfaction positively affects repurchase intentions and both positive and negative disconfirmations increase with the ease of quality evaluation.

According to Berry (2014), service quality has become a significant differentiator and the most powerful competitive weapon which many leading service organizations possess. Leading service organizations strive to maintain a superior quality of service in an effort to maintain a satisfied customer base. These and other factors such as reducing transaction costs, increasing convenience, availability and timeliness of transactions, and improving accessibility for better fund administration are the drivers of internet banking services (Brown & Molla, 2015)

Customers are always aiming to get maximum satisfaction from the products or services that they buy. Winning in today's marketplace entails the need to build customer relationship and not just building the products; building customer relationship means delivering superior value over competitors to the target customers (Kotler, 2002). The National Business Research Institute (NBRI) suggested possible dimensions that one can use in measuring customer satisfaction, e.g.: quality of service, Innocently, speed of service, pricing, complaints or problems, trust in your employees, the closeness of the relationship with contacts in your firm and other types of services needed. Whether an organization provides quality services or not will depend on the customers' feedback on the satisfaction they get from consuming the products, since higher levels of quality lead to higher levels of customer satisfaction (Keller. 2013).

## 1.1.4 Information Communication Technology Outsourcing Services

More and more organisations are outsourcing some or all of their ICT functions to a service provider or the cloud (Gillett, 2014). It means they can free up resources to focus on core business, while gaining access to better ICT infrastructure and services. The service provider's and the customer's commercial interests aren't 100% aligned. The service provider wants to maximise revenue; the customer wants to reduce costs. According to Gartner research, the typical cost of managing an ICT managed service or outsourcing contract is 8–15% of the annual cost of the service. Many organisations just don't have the skills or the time to manage their service providers effectively. This means they're not achieving the outcomes they want nor receiving the best value for their money (Homs, 2010).

Kenya continues to gain more ground as an outsourcing hub with more and more outsourcing service providers entering the sector (Kabagambe, 2012). Besides business process outsourcing (BPO, automated data processing and voice transcribing which were among the early services that Kenya Outsourcing Sector embraced, Payroll Outsourcing is now gaining root with at least 6

data procession and Human Resource Outsourcing companies offering payroll outsourcing to local and regional companies. The main target has been multinational companies setting base in Kenya with limited local processing hence outsourcing most of their Human Resource services. The Outsourced Payroll providers are offering a banquet of benefits to their clients as they try to offer attractive packages. Among the new entrants in outsourced payroll services is Career Options Africa which through a specialized section of its Human Resource Outsourcing Division has opened a modern data center at Juliet Towers, Ngong Road (Kibera, 2015).

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

In IT outsourcing, customer satisfaction is very important to enhance continuation and maintenance of long term relationships however a successful outsourcing relationship will be one that clients stick with for many years. In as much as organisations are adopting business outsourcing, it is not clear the extent to which the customers are satisfied with it. This is because various studies as discussed below remains contradictory as to how ICT outsourcing innovations affects customer satisfaction.

Furthermore, a survey on 130 CIOs showed that more than 42% of customers use three or more outsourcing vendors, while only 22% are sticking with one (Patton, 2011). From a study which was conducted from mid-September to early October 2013 among 607 members of Techtel Enterprise IT Panel and other companies, which included Accenture, ACS, BearingPoint, Cap Gemini, CSC, Cognizant Technologies, Dell Services, EDS, Fujitsu, HP Professional Services, IBM Global Services, InfoSys Technologies, Oracle Services, Tata Consultancy Services (TCS), SAIC, Satyam, Unisys, and WiPro Limited, only 11% of clients see their primary IT outsourcing vendor as highly differentiated or unique one (Weissman & Dugan, 2015).

Weissman and Dugan (2015) added that the client loyalty is very low as only 38% of customers expect to be with their primary IT outsourcing vendor in three years' time. Besides, according to the Gartner survey that was conducted among almost 200 executives from midsize and large companies in Western Europe, it reported that 80% of outsourcing relationships were renegotiated during the lifetime of contract. Meantime, 50% of the survey respondents claimed that the major reason which led to the renegotiation is the lacking of flexibility (Computer Economics, 2012). Furthermore, through literature reviews, it is found that with low customer satisfaction, low customer loyalty, and high contract termination and renegotiation rate, it is an evident that vendors are facing great challenges in fulfilling and satisfying their customers. Since customer satisfaction is highly associated with the vendor performance (Yoon, 2012), it is imperative for vendors to really understand the factors that would improve their customer satisfaction.

In Kenya, the ICT outsourcing service providers previous outsourcing strategies have led to difficulties in maintaining service consistency, and as a result culminated in increased complaints from the customers. Statistics from the Ministry of information communication and technology indicate an increase in customer complaints over the years impacted upon by the fact that in these firms, there are no structured approaches to adopting outsourcing as the strategy of the day, or measures to determine the extent of the degradation of service levels to the customers, (Kinyua, 2014).Various studies have been conducted on IT outsourcing performance locally but very few have been done to investigate the level of customer satisfaction. Barako and Gatere (2011) carried out a survey on Kenyan commercial banks on the perceived benefits, risks and factors determining outsourcing decisions. Wang (2013) did an empirical study on performance after the ITO decision. Sallimat (2012) did a study on outsourcing and performance management

in entrepreneurial firms. Most of these studies focused on the effect of ITO on financial performance. For this reason, the present study sought to fill in the gap by assessing the effect of information communication technology outsourced innovations on customer satisfaction in the service industry, Nairobi Kenya

### **1.3 Research Objectives**

The general objective of this study was to analyze the effect of information communication technology outsourced innovations on customer satisfaction in the service industry, Nairobi Kenya

This study was guided by the following specific objectives;

- i. To assess the effect of after sale service innovation on customer satisfaction in the service industry
- To determine the effect of 24-hour help-desk services innovation on customer satisfaction in the service industry
- To establish the effect of internet network service innovation on customer satisfaction in the service industry

## **1.4 Research Questions**

This study was guided by the following research questions;

- i. What are the effect of after sale service innovation on customer satisfaction in the service industry?
- What are the effect of 24-hour help-desk services innovation on customer satisfaction in the service industry?

iii. What are the effect of internet network service innovation on customer satisfaction in the service industry?

### 1.5 Justification of the Study

The study will give out sourcing organisations an insight as to reasons why the company is not reaping the intended benefits from ICT outsourcing. This will enable the organisations to take appropriate measures to ensure that the company reaps the benefits of ICT outsourcing. The study will also equip similar companies with information on issues to anticipate when venturing into ICT outsourcing.

This information will be especially useful to senior management and more so in ICT departments to help them anticipate and effectively deal with potential challenges that may arise in the course of managing the ICT outsourcing arrangements. The study will assist the key decision makers on matters of ICT outsourcing to make informed decisions on issues regarding ICT outsourcing.

The research will also be very beneficial to ICT service providers as it will give them a better understanding of some of the issues that may arise in the ICT outsourcing relationship with client organizations which in turn will help them take necessary measures so as to provide better outsourced services to their clients. The study will contribute to the body of knowledge on ICT outsourcing and more so in the challenges of ICT outsourcing.

## 1.6 Scope of the Study

This study was restricted to investigating the effect of information communication technology outsourcing innovation on customer satisfaction in the service industry, Nairobi Kenya. The study was guided by three specific objectives which included; after sale service innovation, 24-hour help desk innovation and internet network innovations.

### **CHAPTER TWO**

### LITERATURE REVIEW

#### **2.1 Introduction**

This chapter starts with the theoretical review showing the inter-relationship between the variables under study and discussion of theories related to ICT outsourcing which include: unified theory of acceptance and use of technology and innovation adoption theory. The literature is reviewed in order to gain some insights related to the research problem at hand. The sources of the literature include books, online journals and Internet articles. Theoretical review, empirical review, conceptual framework and summary of the literature

## **2.2 Theoretical Framework**

The theoretical framework adopted for this study involves the unified theory of acceptance and use of technology, Model of the IT Implementation Process and innovation adoption theory that attempts to explain changes in organizations and technological diffusion.

## 2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT is also a popular theory that is being used in ICT adoption research. It is a unified theory because it combines several models such as TRA, TAM, TPB, DOI, PC utilization model, the motivational model and social cognitive theory. UTAUT focuses on four constructs to determine users' usage and acceptance behaviour: performance expectancy, effort expectancy, social influence, and facilitating conditions. The four constructs are considered along with four moderating variables: age, experience, gender and voluntariness of use. UTAUT no doubt has a wider application and may be particularly useful to access the success of ICT and identify the drivers of ICT acceptance.

However, UTAUT is not considered suitable for this study as it "focuses on users who may be less willing to adopt and use a new system" (David Gefen, 2012). UTAUT has been criticized by various independent Commentators for presenting too many independent variables for predicting intentions and behavior and "being less parsimonious than TAM and TAM2" (Bagozzi, 2007; Van Raaij & Schepers, 2008). The current study will borrow concepts employed in UTAUT to investigate the effect IT outsourcing and customer satisfaction and will reinforce the first variable which is after sale service innovation.

This theory motivates ICT service providers to increased operational efficiency in their firms. When it's clear who does what, duplication of work is diminished. This elimination of wasted effort allows time for innovation and improvements to the customer or stakeholder experience or improved working capital. Part and parcel with this is improved cost management as a result of better ability to understand customer demands. This model also creates a baseline to improve upon whereby leaders understand clearly what is done today and therefore have a starting point to improve upon tomorrow

### 2.2.2 Model of the IT Implementation Process (MIIP)

MIIP was first introduced by Kwon and Zmud (1978) and later extended by Cooper and Zmud (1990). The model proposed a framework for directing and organizing research based on innovation, changes in organisations and technological diffusion Kwon and Zmud's (1987) initial model proposed six stages: initiation, organisational adoption, adaptation, acceptance and adoption, routinisation, and diffusion.

MIIP appears to be a much more embracing model than most of the models so far considered. Apart from focusing on the six stages from adoption to diffusion of IT, it also examines intervening variables such as the technology being used, the organisation, the environment, the task in focus, and the users' community characteristics. MIIP appears to be a good theoretical underpinning for ICT adoption and usage studies. However, it is doubtful if MIIP can be used to sufficiently provide a theoretical framework for this study exploring effect IT outsourcing on customer satisfaction and will reinforce the second variable which is 24 hours help desk innovation services. It will be realized that the application of ICT tremendously enhanced customer satisfaction and business success, and a prerequisite for local and global competition.

For firms in the Kenya service sector to be competitive and retain its customers they must capitalize on the enormous capabilities ICT has provided in the financial landscape in meeting the financial needs/aspirations of target markets. This theory also indicated the importance on why the ICT service providers should adopt research based on innovations as they sought to improve their customers satisfaction levels. Internet service providers need to fully understand the available options; not only from an individual business perspective, but also in relation to the likely impact on the industry as a whole.

## 2.2.3 Innovations Adoption Theory

Innovations adoption theory is a theory that seeks to explain how, why, and at what rate new ideas and technology spread. Rogers' (1995) defines diffusion as 'the process by which an innovation is communicated through certain channels over time among the members of a social society' (Rogers, 1995). An innovation is an idea or object that is perceived to be new (Rogers, 1995). According to the theory the rate of diffusion is affected by an innovation's relative advantage, complexity, compatibility, trialability and observability. Rogers (1995) defines relative advantage as 'the degree to which an innovation is seen as being superior to its predecessor'. Complexity, which is comparable to TAM's perceived ease of use construct, is 'the

degree to which an innovation is seen by the potential adopter as being relatively difficult to use and understand'.

Compatibility refers to 'the degree to which an innovation is seen to be compatible with existing values, beliefs, experiences and needs of adopters'. Trialability is the 'degree to which an idea can be experimented with on a limited basis'. Finally, observability is the 'degree to which the results of an innovation are visible' (Rogers, 1995). The diffusion theory is relevant because it explains the reason why ICT firms adopt technical innovations. One of the reasons why ICT firms adopt technical innovations is relevant advantage. This means that ICT firms that adopt technical innovations have relatively better financial advantage than those who do not. This theory will reinforce the third variables which is internet network innovation.

Theory and posited that innovations are not equivalent units of analysis and explains how an innovation can be accepted and disseminated among ICT service customers. Some innovations receive high level of adoption in few years by specific population, in contrast; others need decades. The process begins with the ICT service providers awareness of an innovation, and during this stage, firms actively seek or receive information and shape their favourable or unfavourable beliefs and perception regarding the innovations.

### **2.3 Empirical Reviews**

This sectional analysis empirical studies conducted all over the world ICT outsourcing by organisations. Every variable has been addressed separately and gaps established in each case.

#### 2.3.1 After Sale Service innovations and Customer Satisfaction in The Service Industry

Reinartz and Lelong (2012) in a case study of ICT service providers in England describe the facility services market, both globally and locally, is highly fragmented and composed of

thousands of small service providers that compete in their local markets against a few global players. According to Reinartz and Lelong (2012) smaller and local ICT service providers have tried to cope with this competition in various ways. One common way is to provide integrated solutions bundling several after sale service innovations. They also found that primary determinants for success of an after-sale service innovation by the service providers were the awareness of the external market, the development process and the firm's strategic and business fit.

In the case of the Danish market, a survey conducted by Goyal and Pitt (2013) revealed that after sale service innovations were achieved by partnering between organisations maximise the opportunity to think and act beyond an organisation boundaries, bringing together aspirations, skills and knowledge of all stakeholders involved who work to gain profits and competitive advantage in ICT industry. They conclude that after sale service ICT innovation should be a mindset and not a one-time event. Innovation management principles should be incorporated as a part of daily schedule for each employee at all levels, strategic, tactic and operational.

Various sources such as Wang and Yang (2007) quote only a 33% satisfaction rate with outsourced IT services. Loh and Venkatraman (2012) suggest a negative relationship between IT performances and outsourcing that was also empirically supported. Low economic returns on IT investment appear to affect the propensity of firms to outsource more of their IT infrastructure to vendors. Organisations have failed to document substantial productivity improvements and those productivity statistics that do exist have yet to prove that offshore outsourcing works.

After-sales services can create sustainable relationships with customers and contribute significantly to customer satisfaction (Kurata & Nam, 2010). By offering different after-sales

services during the various stages of the primary product lifecycle, the provider can ensure product functionality and thereby customer satisfaction. This may lead to a fruitful relationship between the provider and the customer over time, allowing for more transactions (Ahn & Sohn, 2009). Returning customers are the most profitable ones as they require less marketing effort and relationship building (Hoffman & Bateson, 2010; Jacob & Ulaga, 2008). Therefore, aftersales services have acquired a critical role as a means to satisfy and retain customers. Especially in a time when firms are experiencing increased pressure to downsize operations and to become more highly specialized in their core competencies, they demand more tailored services (Weissenberger- Eibl & Koch, 2007).

According to McCracken, (2010) the key step in devising a differentiation strategy for a firm is to determine what makes a company different from a competitor's. Factors including market sector quality of work, the size of the firm, the image, graphical reach, involvement in client organizations, product, delivery system, and the marketing approach have been suggested to differentiate a firm. To be effective, the message of differentiation must reach the clients, as the customer's perceptions of the company are important. Berthoff (2008) suggest bending the customer's will to match the company's mission through differentiation. When using differentiation, firms must be prepared to add a premium to the cost. This is not to suggest costs and prices are not considered; only it is not the main focus. However, since customers perceive the product or service as unique, they are loyal to the company and willing to pay the higher price for its products.

Some key concepts for establishing differentiation include: speaking about the product to select panels, writing on key topics affecting the company in the association's magazine or newsletter,

becoming involved in the community, being creative when composing the company's portfolio, offering something the competitor does not or cannot offer, adding flair and drama to the store layout, providing e-commerce, making access to company information and products both quick and easy, using company size as an advantage, training employees with in-depth product and service knowledge, offering improved or innovative products, emphasizing the company's state-of-the-art technology, quality service, and unique products/services, using photos and renderings in brochures and selecting products and services for which there is a strong local need (Darrow et al., 2011).

Parasuraman (1988) pointed that the key service quality attributes that determine the level of customer satisfaction will include five dimensions, namely; tangibility, reliability, responsiveness, assurance and empathy associated with the service. Bahia and Nantel (2010) noted that alternative measure of service quality in retail banking, which can be extended to other service organizations, can be grouped into six dimensions that include effectiveness and assurance of the service, ease of accessibility, price, service portfolio and reliability.

Various factors have facilitated the ability to outsource IT functions. In research by Frost and Sullivan (2004) examining impact of ICT outsourcing on operational efficiency found that managing the outsourcing partner and changing vendors or outsourcing partners when necessary all take valuable resources. These productivity costs incurred in knowledge-gathering maintenance and the cost of relearning lost knowledge, combined with costs in transferring contracts, is borne by the whole business, not necessarily by the department managing the contracts. The study concluded that ICT Outsourcing is successful but can result in sacrificing

long-term knowledge assets for short-term gains. The study recommended that organisations must spend additional resources in knowledge retainment (Huws, & Dahlmann, 2014).

In the banking sector, some researchers have established positive outcome of ICT outsourcing in the banking sector. In his study on role of ICT outsourcing in mitigating Bank Frauds and Forgeries in Nigeria, Llopis (2010) assessed the role of ICT outsourcing on detection, prevention of frauds and forgeries in the Nigerian banking sector. Their findings concluded that ICT outsourcing played effective role in reducing Bank Frauds and Forgeries. They recommended that banks should continually outsource ICT systems to curb the menace.

In Japan Yan and Will cocks, (2013) in his study on response strategies to fraud by the commercial banks in Japan, assessed the impact ICT outsourcing strategy on banking security. The study found out that banks that had outsourced ICT functions decreased the fraud cases by 50% from the years 2009 to 2012.

 $H_{01}$ : After Sale Service innovations have no statistical significance on customer satisfaction in the service industry.

#### 2.3.2 Effects of 24-Hour Help-Desk Services Innovation and Customer Satisfaction

Help desk delivery encompasses the tasks of communicating effectively and expediting the resolution of IT problems to meet customer expectations (Kadre, 2011). It combines a blend of staff, processes, information and technology to increase productivity and optimize customer service (Joshi & Chebbiyyam, 2011). According to Leung and Lau (2014) a 24-hour help desk environment, communication is not simply limited to the interaction between the service desk representative and their customers. It also encompasses the interactions of the service desk

representative with their managers to ensure the customer's inquiry is resolved in an efficient manner (Kadre, 2011).

Nuckles and Ertelt (2014) further notes that in a multi-level service desk environment, customers can directly contact the service desk via different types of media, i.e. email, telephone, web form, fax, instant messaging, SMS etc. If the customer inquiry is simple and straightforward, the first level service desk representative will resolve the issue. However, as the complexity of the issue increases the representatives have to escalate the inquiry until it is resolved. Throughout this process interactions are continuously occurring between the representatives and the customer (Nuckles & Ertelt 2014). The interactions between the service desk representative and the customer are dynamic in nature, and the service desk representative needs to assure the customer that they understand the issue and the resolution. Evidently, communication is a central component of the service desk, where the technology utilised is an essential part of that communication (Zigurs 2014).

According to Kumar (2010) customers are the lifeblood of any business. Customer care therefore is paramount. The ways in which services to publish can be improved are numerous and organizations should incur considerable expense researching then servicing image and reputation. The public relations department at an organization usually has the main task of ensuring that the mainstream marketing efforts are fully supported through winning the esteem of customers and the public at large. Without a good reputation for understanding customer problems and requirements, an organization will lose existing customers and fail to attract at least its market share of new business. Customers who are not given an opportunity to business can do damage to the organization by the word of mouth, because of influence they have on the existing potential customers. A complaints department is essential for the success in any service business responsive to complaints and diligent in finding out facts (Davidson,2014).

Along with the traditional communication media i.e. email, phone, fax etc. various online communication media i.e. web portal, social media, etc are being utilised in the service desk environment (Coelho, 2013). Therefore, providing customers with support through the utilization of contemporary media has received increased attention in the last few years (Bharadwaj,2013). Using multiple media streams in the service desk environment, ultimately improves the service experienced by customers through efficiency gains (Montoya, 2013). Considering the different media's strengths and weaknesses, the selection of appropriate media needs to be efficient and effective for communication so that the customer receives a resolution to their issue in a timely manner, whilst still conserving service quality (Knapp 2013). Consistently, the service desk representative needs to determine the effective media to use, to ensure that the issue can be resolved in a timely manner. Thus, the service desk representative needs to consider the urgency of the issues, confidentiality constraints, accountability, social interaction and information integrity needs when deciding on the correct media to use to communicate with various stakeholders (Fernando, 2011).

Customer satisfaction is imperative in the service desk environment as it is linked to brand loyalty, with unsatisfied customers likely to abandon the organisation (Aksin, 2007). Both the issue resolution and the interaction between the customer and the service desk representative impacts the satisfaction of the customer, hence the communication between the representative and the customer is of utmost importance. Service desks are used to primarily provide resolutions to predominantly technical issues experienced by an individual employee or organisation, as such they are used by any organisation that relies on IT to support their underlying business processes (Anton, 2014). Therefore, they are prevalent in most industries (e.g. banking and finance, education, telecommunications etc.).

To attain effective and efficient end-user support the relationship between the human and technology capabilities need to be considered (Oppermann, 2014). Therefore, these service channels (i.e. in-person, telephone, automated) should not be treated disjointedly, more so, they should be combined to yield higher end-user satisfaction (Gu & Higa, 2009). Furthermore, current variations in organisational forms, such as de-layered management, authorised workers and improvised work groups, have created the obligation to secure efficient information exchange and communication among scattered workers and work groups (Karahanna, 2011). Therefore, in the service desk environment both inter-organisational and intra-organisational communication are imperative as the mutual understanding of the issue and resolution is necessary to provide effective and efficient support to the customer.

 $H_{02:}$  A 24-hour help desk innovation services have no statistical significance on customer satisfaction in the service industry.

# 2.3.3 Internet Network Service Innovation and Customer Satisfaction

Various researchers both globally and locally have investigated the relationship between Outsourcing IT functions on innovations expectations. Client firms expect their vendors to help them innovate. In Brazil; Kishore, et al, (2009) investigated the satisfactory levels with the outsourcing firms in relation to continuous process innovation, 256 firms were engaged in this research. The study concluded that majority of the client firms in this survey expect vendors to either turn ideas into improved processes (56%), transform existing products (55%), help transform existing processes (53%) or help turn ideas into new products. However, when asked

how such expectations will come into effect, 66% of the client firms indicated that an engagement with an outsourcing vendor should free up in-house resources that can focus on higher value activities. Clearly, such a belief implies that the vast majority of client firms still believed that innovation is core to the firm's value chain and as such should be carried out inhouse. Therefore, the majority of client firms still rely on their own knowledge-base for innovation, failing to recognize that innovation can in fact be a service.

Innovation can not only be delivered through the offering of new products, services and processes, but also via the transformation of existing processes. In Malaysia, Ahlan *et al.*, (2013), investigated the relationship between radical innovation and outsourcing of ICT services. The study found out that radical innovation is strongly associated with both contractual and relational governing approaches. The results of this study also suggest that client firms seeking radical innovations in outsourcing of ICT functions should first develop strong contract management capabilities and then complement those with relationship management capabilities to ensure that the parties shift their attitudes from a transactional approach to a collaborative mode.

In Australia, Haveckin, (2012), investigated the level of adherence to product innovation process by the ICT contracting firms and satisfactory with the contracting firms. The results of the study showed that there is a misperception that contracting ICT is not designed encompasses innovation. The study recommended that ICT outsourcing contracts should include clauses that incentivize vendors to think about innovations regardless of the nature of the process or system outsourced.

Sawhney and Prandelli (2010) argue that with the new technology it is time to change the perspective to a view where the customer and the company create knowledge together instead of the company merely exploiting the customer. Moreover, McQuarrie & McIntyre (2015) argue

that the users do not normally take part in the first phases of the creating of new innovative ideas, because the companies do not trust them in that area. They continue by stating that these phases are solely controlled by the professional designers of the company and users are not involved before the testing and evaluation of those ideas, where the customers are part of focus groups or some other form of testing.

This despite that Magnusson et al. (2013) argue that the user's ideas are more original and user friendly than the designer's. The backside according to them is that the products are less producible. Furthermore, they state that with the help of the customer's ideas the professionals can create new services and that the ideas also can be used as an inspiration for the designers. Alam and Perry (2012) argues that other advantages with customer involvement is that it can generate better and more differentiated services which are better suited for the customer's wants and needs. They also state that user involvement can help the company educate the customers in using the new services as well as help the firm with the diffusion of the services, which can make the new innovations gain acceptance in the market faster. Furthermore, there are different objectives of the customer involvement depending on which types of innovations the companies want to create (Lettl, 2012).

In South Africa, Flecker and Dahlmann (2014) investigated the possible means to achieve innovation in outsourcing process. The study aimed at helping ICT client companies to incorporate innovation in their outsourcing strategy. The study concluded that client firms need to develop the measurement instruments for the incremental innovation expected to be delivered by the vendors and design a framework for which radical innovation will be pursued with selected vendors. The measurements for incremental innovation should be developed against the benchmark in the industry. Executives of the ICT contracting firms should also consider radical

innovation that can be achieved in their outsourcing engagements. Client firms should also seek incremental improvements in critical operations outsourced to a third-party service provider

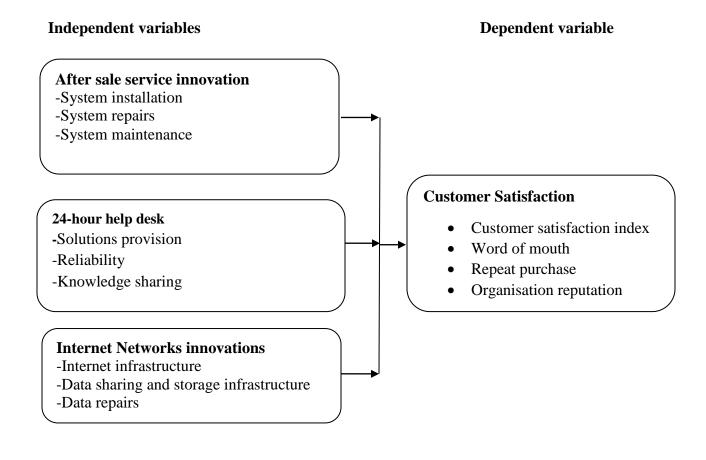
 $H_{03:}$  Internet Network innovations have no statistical significance on customer satisfaction in the service industry.

# **2.4 Conceptual Framework**

A conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas. Strong conceptual frameworks capture something real and do this in a way that is easy to remember and apply. A conceptual framework is a researcher use to guide their inquiry; it is a set of ideas used to structure the research, a sort of map that may include the research question, the literature review, methods and data analysis. Researchers use a conceptual framework to guide their data collection and analysis (Mugenda, 2004).

# FIGURE 2.1

# **Conceptual Framework**



# **2.5 Operationalization of Variables**

# **TABLE 2.1**

# **Operational Definition of Variables**

Type of variable	Variable	Indicators	Scales	Collection tool	Type of Analysis
Independent	After sale service innovation	-System installation -System repairs -System maintenance	Ordinal	Questionnaire	Descriptive
	24-hour help desk	-Solutions provision -Reliability -Knowledge sharing	Ordinal	Questionnaire	Descriptive
	Internet Networks innovations	-Internet infrastructure -Data sharing and storage infrastructure -Data repairs	Ordinal	Questionnaire	Descriptive
Dependent	Customer satisfaction	Word of mouth Repeat purchase Relationship with contacts Organisation reputation	Ratio/ordinal	Questionnaire	Descriptive

# 2.6 Research Hypotheses

 $H_{01:}$  After sale service innovation have no statistical significance on customer satisfaction in the service industry.

 $H_{02:}$  A 24-hour help desk innovation services have no statistical significance on customer satisfaction in the service industry.

 $H_{03:}$  Internet network innovations have no statistical significance on customer satisfaction in the service industry.

# **CHAPTER THREE**

# METHODOLOGY

# **3.1 Introduction**

This section outlines the methodology that was used in carrying out the study. It comprises of research design, population, sample size and sampling procedure, data collection method and data analysis and presentation.

# **3.2 Research Design**

The study adopted a descriptive research design. A descriptive study is concerned with determining the frequency with which something occurs or the relationship between variables Bryman and Bell (2007). Thus, this approach is appropriate for this study, since the researcher intends to collect detailed information through descriptions and was useful for identifying variables and hypothetical constructs. This method provided descriptions of the variables in order to answer the research questions in the study.

According to Mugenda and Mugenda (2009) it is important and appropriate to use data where subjects are observed in either natural set ups without manipulating the environment and when collecting information about people's attitudes and opinions. It was therefore an efficient way to use to obtain information needed to describe the attitudes, opinions and views of the respondents.

# **3.3 Target Population**

The population of interest of this study was all firms in the service sector, operating in Nairobi Central Business District that outsource the ICT services. According to Ngechu (2006), a population is a well-defined or set of people, services, elements and events, group of things or households that are being investigated. The population of the study was all 1202 registered

businesses operating in the service sector segment (Nairobi County Business Licensing Section,

2017).

Target Population							
Service Recipients	Frequency	Percentage					
Transport	287	24					
Hospitality	145	12					
Entertainment	260	22					
Health Sector	120	10					
Banking	43	4					
Cleaning	87	7					
Security	54	4					
Tourism	33	3					
Insurance	128	11					
Service Science and Engineering	45	4					
Total	1202	100					

# TABLE 3.1

Source: Nairobi County Business Licensing Section (2017)

# **3.4 Sample Size and Sampling Procedure**

A sample is a small group obtained from accessible population, (Mugenda & Mugenda, 2009). Sampling is the procedure a researcher uses to gather people, places or things to study, (Kombo & Tromp, 2006). Stratified random sampling was applied in carrying out the study as per the departments. Stratified random sampling ensures inclusion, in the sample, of sub groups, which otherwise would be omitted entirely by other sampling methods because of their small number of population, (Mugenda & Mugenda, 2009).

Sampling is done to some elements of a population so that conclusions about the entire population can be drawn. The ultimate test of a sample design is how well it represents the characteristics of the population it purposes to (Thorn hill, 2009). From the population of 1202, the study took 33.3% of the population of the entire population. According to Cooper and

Schindler (2003) a representative sample is one which is at least 10% of the population thus the choice of 33.3% is considered as representative. Further Mugenda and Mugenda (2007) states that a sample size of between 10% to 30% of the entire population is adequate for any academic research. In total, the sample size for this study was 400 firms.

# **3.5 Instrumentation and Data Collection**

This study utilized a questionnaire to collect primary data from the sample size selected. The questionnaire designed for this study comprised of two sections. The first part included the demographic and operational characteristics designed to determine fundamental issues including the demographic characteristics of the respondents. The second part was devoted to the analysis of ICT outsourcing service innovation and Customer Satisfaction.

The questionnaire was designed to include both structured and unstructured questions. The structured questions were used in an effort to conserve time and money as well as to facilitate an easier analysis as they were in immediate usable form; while the unstructured questions were used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information.

After pre-testing the questionnaire, the letter from NACOSTI was sought for data collection. The researcher trained research assistants for data collection. Further an introductory letter from KCA University was sought. A descriptive approach was applied to collect primary data by the use of guided questionnaires from the selected participants to get their views. Secondary data was mainly sourced from the library, on-line records and journals within reach to help determine the ideal situation

# **3.6 Validity and Reliability of the Instrument**

The researcher carried out a pilot study to pretest and validate the questionnaire. This pilot study involved 10 respondents working in three transport firms. According to Isaac (2005), a sample size of at least 10 respondents for a pilot study is adequate for any study. A total of 10 employees from the three firms were picked randomly and a questionnaire were issued. The pilot study aimed at determining the reliability of the questionnaire including the wording, structure and sequence of the questions. The questionnaires were hand delivered and administered at the respondents' place of business to ensure objective response and reduce non-response rate. The results of the pilot study were not included in the actual study.

Reliability refers to the consistency of measurement. The questionnaires were considered reliable if they gave consistent results. Reliability however does not necessarily mean the validity of an instrument but it does contribute to validity (Kothari, 2013). In order to test for reliability, questionnaire responses from the pilot test was entered in SPSS (version 21) after which, the Cronbach's alpha was generated. Cronbach's alpha ranges between 0 - 1. Scores between 0 - 0.6 indicate that the instrument has a low reliability while scores of 0.7 and above indicate that the instrument has a high level of internal consistency and reliability.

# **3.7 Data Processing and Analysis**

Before processing the responses, the completed questionnaires were edited for completeness and consistency. Data collected was quantitative in nature which was coded to enable the responses to be grouped into various categories. Quantitative data was summarized using descriptive statistics. SPSS (Version 21) was used to analyse the data.

Inferential statistics were used to generate a Linear Regression Model. This straight-line predictor model was used to show the extent to which independent variables influence the dependent variable. The general form of the Multiple Linear Regression Model is;

 $Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\in$ 

Where,

*Y: the independent variable (Customer satisfaction) expressed as a linear combination of independent variables*  $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$ 

*X*<sub>1</sub>: After sale service innovation

*X*<sub>2</sub>: 24-hour help desk service innovation

*X<sub>3</sub>: Internet Networks Innovations* 

 $\beta_0$ : The regression constant i.e.  $Y = \beta_0$  when  $X_1, X_2, X_3, \dots, X_k = 0$ 

 $\beta_1$ :  $\beta_2$ :  $\beta_3$ : are the independent variables Coefficient

 $\in$ : Error term

Linear regression analysis was used to estimate the coefficients of a linear equation and the Independent variables that best predict the value of the dependent variable. From this model, test of significance at 5% significant level was conducted on the various variables of this study using coefficient of determination ( $\mathbb{R}^2$ ), correlation coefficient ( $\mathbb{R}$ ), F-test and ANOVA table in order to check the significant of the data analyzed.

# **CHAPTER FOUR**

# **RESULTS AND FINDINGS**

# **4.1 Introduction**

This chapter discusses the interpretation and presentation of the findings obtained from the field. The chapter presents the background information of the respondents and the findings of the analysis based on the objectives of the study. Descriptive and inferential statistics have been used to discuss the findings of the study.

# 4.2 Response Rate

The study targeted a sample size of 400 firms from which 324 filled in and returned the questionnaires making a response rate of 81 percent. This response rate was satisfactory to make conclusions for the study. The response rate was representative. According to Mugenda and Mugenda (1999), a response rate of 50 percent is adequate for analysis and reporting; a rate of 60 percent is good and a response rate of 70 percent and over is excellent. Based on the assertion, the response rate was considered to be excellent.

# **4.3 Reliability Analysis**

Internet Network Service

A pilot study was carried out to determine reliability of the questionnaires. Reliability analysis was done using Cronbach's Alpha which measured the internal consistency by establishing if certain item within a scale measures the same construct.

# **TABLE 4.1**

# ScaleCronbach's AlphaNumber of ItemsAfter Sale Service0.811624-Hour Help Desk Service0.7286

# **Reliability Analysis**

0.791

5

Gliem and Gliem (2003) established the Alpha value threshold at 0.7, thus forming the study's benchmark. Cronbach Alpha was established for every objective which formed a scale. The table shows that After Sale Service had the highest reliability ( $\alpha$ = 0.811), followed by Internet Network Service ( $\alpha$ =0.791) and then 24-Hour Help Desk Service ( $\alpha$ =0.728). This illustrates that all the three variables were reliable as their reliability values exceeded the prescribed threshold of 0.7.

# **4.4 Diagnostic Tests**

This section analyses the diagnostic tests conducted for the data collected in the study. They include the Multicollinearity Test, Normality Test and Test for Heteroscedasticity.

# 4.4.1 Multicollinearity Test

The study sought to find out the collinearity among the independent variables using tolerance and variation inflation factor (VIF) statistics of the predictor constructs.

#### **TABLE 4.2**

# **Tolerance and VIF Measures**

0.785	1.227
0.847	1.248
0.811	1.322
	0.017

a. Dependent Variable: Customer Satisfaction

The study adopted the Menard (2002) threshold value who stated that variance inflation factor of 4.0 to represent high multicollinearity status. From Table 4.2 After Sale Service had a VIF of 1.227, 24-Hour Help Desk Service had a VIF of 1.248 while Internet Network Service had a VIF 1.322. The findings show that all the independent variables attained a high tolerance value, which is a clear indication that the beta values of the regression equation of the independent variable would be stable with low standard error terms. Tolerance is regarded as part of the

denominator in calculating the confidence limits on the partial regression coefficient. According to the literature by Porter and Gujarat (2009), the VIF of independent variables that exceed 10 as a rule of thumb is regarded as collinear. Therefore, benchmarking on this rule of thumb implies that there was no collinearity among the independent constructs.

# 4.4.2 Normality Test

This test sought to find out the normal distribution for the customer satisfaction which was tested for Gaussian distribution using numerical and graphical methods. According to Indiana (2011) many data analysis methods such as t-test, ANOVA and regression analysis relies on the assumption that data were sampled from a Gaussian distribution.

# **TABLE 4.3**

# Kolmogorov-Smirnov and Shapiro-Wilk tests for Customer Satisfaction

	Kolmogorov- Smirnov <sup>a</sup>		Shaj Will		
	Df	Stats Sig	Dif	Sig	Statistics
<b>Customer Satisfaction</b>	3	0.088	3	.200*	.956

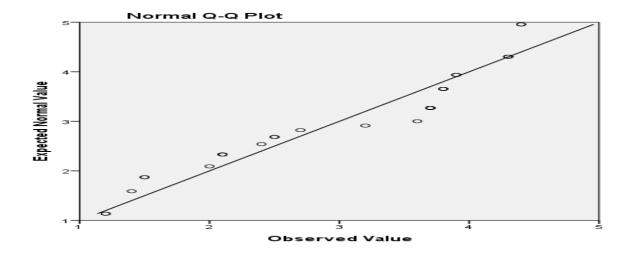
a. Lillierfors Significance Correction

#### \* Lower bound of true significance

The computed values of Kolmogorov-Smirnov and Shapiro-Wilk test indicate insignificant statistics with p-value of 0.200 which implies that customer satisfaction is normally distributed. Nevertheless, on the overall, the distribution appears normally distributed. More so, on the basis of the calculated insignificant test statistics, normality of the dependent variable was maintained. According to the findings by Shelvin and Miles (2010), the significance test result for such data is regarded as fairly accurate.

# FIGURE 4.1

#### **Normal Curve Plot**



Further, the figure 4.1 shows the visualized distribution of random variables of difference between an empirical distribution and theoretical distribution of customer satisfaction. At very low values of the variable, some minimal deviation from normality is regarded as normal.

# 4.4.3 Test for Heteroscedasticity

The research also aimed to test for the heteroscedasticity using the Breusch-Pagan/Cook-Weisberg test. The results are as follows;

# **TABLE 4.4**

# Breusch-Pagan/Cook-Weisberg test Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity				
Ho: Constant variance				
Variables: fitted values of Customer Satisfaction				
$Chi^2(1) = 0.22$				
$Prob > chi^2 = 0.7134$				

From the findings, the chi-square value was small, indicating heteroscedasticity was not a problem (or at least that if it was a problem, it was not a multiplicative function of the predicted

values). Also, it was revealed that the p value of 0.7134 was greater than 0.05 significant levels implying that there was no violation of homoscedasticity. One of the important assumptions of linear regression is that, there should be no heteroscedasticity of residuals (Shelvin & Miles, 2010). The results above indicated that the variance of the errors was constant across observations.

# 4.4.4 Diagnostic Tests Assumptions

The Diagnostic Tests are based on the following assumptions;

- i. The data come from a multivariate normal distribution
- ii. Observations are independent.
- iii. All variables have equal variance among treatment levels

# **4.5 Demographic Information**

The demographic variables included; gender, age, education level and the age of the organisation.

# **4.5.1 Gender of the Respondents**

The respondents were requested to indicate their gender category. From the findings, majority of the respondents as shown by 58% indicated that they were males while 42% of the respondents were females. These findings depict that both genders were fairly involved in the study and thus the results will not suffer from gender biasness.

# **4.5.2** Age of the Respondents

The respondents were requested to indicate their age categories.

#### **TABLE 4.5**

# Age of the Respondent

Age Category	Frequency	Percent
Below 25 years	18	5.6%
25-35 years	89	27.5%
36-45 years	113	34.9%
46-50 years	91	28.1%
Above 50 years	13	4.0%
Total	324	100.0%

Most of the respondents as shown by 34.9% were aged between 36 and 45 years, 28.1% of the respondents belonged to age category 46 to 50 years, 27.5% of the respondents were aged between 25 and 35 years, 5.6% of the respondents were below 25 years while 4.0% of the respondents were above 50 years of age. This is an indication that respondents were drawn from different age categories.

# 4.5.3 Respondents' Highest Level of Education

The study also sought to determine the respondent's level of education.

Age Category	Frequency	Percent
Certificate	15	4.6%
Diploma	67	20.7%
Bachelor's degree	155	47.8%
Masters and above	87	26.9%
Total	324	100.0%

TABLE 4.6Age Category of the Respondent

From the study findings, most of the respondents as shown by 47.8% had attained a bachelor's degree, 26.9%% of the respondents had a master's degree and above, 20.7% of the respondents had attained a diploma while 4.6% of the respondents had attained a certificate. These findings show that the respondents were educated enough to understand the questions and would thus provide credible information related to this study.

# 4.5.4 Age of the Organization

The respondents were requested to indicate how long their organizations have been in existence.

Age Category	Frequency	Percent
Less than 2 years	98	30.2%
2-6 years	134	41.4%
7-10 years	78	24.1%
more than 10 years	14	4.3%
Total	324	100.0%

# **TABLE 4.7**

# Age of the Respondent

Most of the organizations as shown by 41.4% have been in existence for between 2 and 6 years, 30.2% of the firms between 7 and 10 years, 24.1% of the organization for less than 2 years while 4.3% of the organizations for over 10 years. This is an indication that the firms involved in this study had been in existence for long enough and hence conversant with effect of information communication technology outsourced innovations on customer satisfaction.

# 4.5.5 Number of Times Users Outsourced ICT Services

The study wanted to establish the number of times the respondents had ever outsourced ICT services from the following providers.

# **TABLE 4.8**

# **Times Users Outsourced ICT Services**

ICT Service Provider	Once	Twice	3 Times
Safaricom	20%	-	80%
Airtel	60%	-	-
Orange Telcom	100%	-	-
Jamii Telcom	10%	80%	10%
Kinde Engineers	100%	-	-
Alphajiri Kenya	100%	-	-
Alwan Communications Ltd	100%	-	-

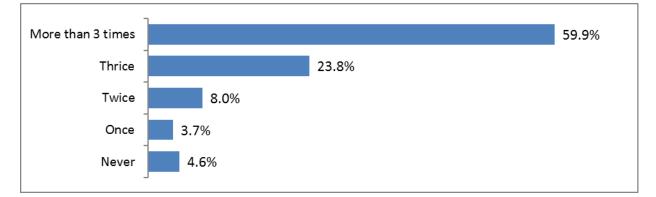
From the table above, it is evident that very few firms outsourced ICT services from the providers more than three times. The few who outsourced ICT services did it with the large telecommunication firms in the industry of internet provision. This can be associated with their huge infrastructure plus effective customer care departments. The above findings agree with those of Yoon, (2012) who found that with low customer satisfaction, low customer loyalty, and high contract termination and renegotiation rate, it is an evident that vendors are facing great challenges in fulfilling and satisfying their customers.

# 4.5.6 Change of Service Providers

The researcher aimed at establishing how frequent the firms changed their service providers. The findings are as shown in Figure 4.2.







From the study findings, the research found majority of the firms as shown by 59.9% have changed their service providers more than 3 times, 23.8% of the firms have changed service providers thrice, 8.0% of the firms twice, 4.6% of the firms have never changed while 3.7% of the firms have changed the service providers only once. These findings depict that majority of the firms are not fully satisfied with the service providers and hence end up shifting from one service provider to the next when their needs are not satisfactorily met.

# 4.6 After Sale Service Innovations and Customer Satisfaction

The researchers sought to establish the effects of after sale service innovations on customer satisfaction. The respondents were requested to indicate their level of satisfaction with some statements relating to the effects of after sale service innovation on customer satisfaction. The study used the following scale as proposed by Cooper and Schidler (2003);0 to144= extremely dissatisfied;1.45 to 2.44=Not Satisfied; 2.45 to 3.44= neutral; 3.45 to 4.44= satisfied; 4.45 to 5= extremely satisfied. The mean shows where the opinion of majority lies while standard deviation shows how much the responses deviates from the mean.

#### **TABLE 4.9**

Statements	Extremely Dissatisfied	Not Satisfied	Neutral	Satisfied	Extremely Satisfied	Mean	Std. Deviation
ICT after sale services are innovative	96	122	18	56	32	2.401	0.776
ICT service providers system installation methods are innovative	129	119	28	32	16	2.034	0.656
ICT service providers methods of system repair are innovative	121	97	21	57	28	2.302	0.945
ICT provider's methods of systems maintenance are innovative	118	100	18	57	31	2.330	0.890
Compared to my ideal, I am satisfied with the performance of this provider	108	115	32	44	25	2.269	0.960
ICT service providers methods of systems change-over are innovative	99	95	30	59	41	2.531	0.773

# After Sale Service Innovations and Customer Satisfaction

From the findings, majority of the respondents were not satisfied with innovativeness of: system installation by the ICT service providers as shown by a mean of 2.034, methods of system repair by the ICT service providers as shown by a mean of 2.302, methods of system maintenance by the ICT service providers as shown by a mean of 2.330 and ICT after sale services as shown by a

mean of 2.401. Majority of the respondents also indicated that compared to their ideal ICT service providers, they are not satisfied with the performance of the providers they currently have, as shown by a mean of 2.269. These findings show that ICT service providers are not meeting the needs of most firms as expected.

This is consistent with the findings of Wang and Yang (2007) who quoted only a 33% satisfaction rate with outsourced IT services. Loh and Venkatraman (2012) also suggested a negative relationship between IT performances and outsourcing that was also empirically supported. They also noted that low economic returns on IT investment appear to affect the propensity of firms to outsource more of their IT infrastructure to vendors. According to them, organisations have failed to document substantial productivity improvements and those productivity statistics that do exist have yet to prove that offshore outsourcing works for these organizations.

# 4.7 24-Hour Help-Desk Services Innovation and Customer Satisfaction

The researcher further sought to establish the effects of 24-hour help-desk service innovations on customer satisfaction. The respondents were requested to indicate their level of satisfaction with some statements relating to the effects of 24-hour help-desk service innovation on customer satisfaction. The findings were as shown in the table below. The study used the following scale as proposed by Cooper and Schidler (2003);0 to144= extremely dissatisfied;1.45 to 2.44=Not Satisfied; 2.45 to 3.44= neutral; 3.45 to 4.44= satisfied; 4.45 to 5= extremely satisfied. The mean shows where the opinion of majority lies while standard deviation shows how much the responses deviates from the mean.

#### **TABLE 4.10**

Statements	Extremely Dissatisfied	Not Satisfied	Neutral	Satisfied	Extremely Satisfied	Mean	Std. Deviation
24-hour help desk always help organisation to communicate effectively	100	118	22	52	32	2.377	0.974
24-hour help desk hardly breaks down	125	101	52	30	16	2.108	0.785
24-hour help desk breakdown is resolved within a very short time	119	99	32	47	27	2.272	0.866
24-hour help desk innovation is easy to use	118	100	18	57	31	2.330	0.883
24-hour help desk innovation is sufficient for organisation needs	112	112	49	24	27	2.204	0.899
24-hour help desk is toll free	102	95	38	58	31	2.448	0.724

#### 24-Hour Help-Desk Services Innovation and Customer Satisfaction

From the findings, majority of the respondents were not satisfied with the statements that 24hour help-desk: hardly breaks down, as shown by a mean of 2.108; innovation is sufficient for organization needs, as shown by a mean of 2.204; breakdown is resolved within a very short time, as shown by a mean of 2.272, innovation is easy to use, as shown by a mean of 2.330; always help organization to communicate effectively, as shown by a mean of 2.377; is toll free, as shown by a mean of 2.448. According to Kumar (2010) customers are the lifeblood of any business. Customer care therefore is paramount. From these findings, firms are so far discontent with the 24-hour help desk innovations provided by the ICT service providers. Davidson (2014) warns that customers who are not given an opportunity to business can do damage to the organization by the word of mouth, because of influence they have on the existing potential customers. According to him, complaints department is essential for the success in any service business responsive to complaints and diligent in finding out facts.

# 4.8 Internet Network Service Innovation and Customer Satisfaction

The researcher also sought to determine the effects of internet network service innovations on customer satisfaction. The respondents were requested to indicate their level of satisfaction with some statements relating to the effects of internet network service innovation on customer satisfaction. The findings were as shown in the table below. The study used the following scale as proposed by Cooper and Schidler (2003);0 to144= extremely dissatisfied;1.45 to 2.44=Not Satisfied; 2.45 to 3.44= neutral; 3.45 to 4.44= satisfied; 4.45 to 5= extremely satisfied. The mean shows where the opinion of majority lies while standard deviation shows how much the responses deviates from the mean.

Statements	Extremely Dissatisfied	Not Satisfied	Neutral	Satisfied	Extremely Satisfied	Mean	Std. Deviation
Our ICT service providers internet network rarely fails	102	116	32	42	32	2.340	0.920
Our ICT service providers internet is quickly restored when it fails	98	130	47	35	14	2.188	1.065
Our ICT service providers supply an alternative source of internet network to support the major one	126	89	52	20	37	2.238	0.848
Our ICT service providers internet has an automatic repair system that ensures continuity of operation	171	134	3	11	5	1.596	0.851
Generally, our ICT service provider provides an efficient internet network	102	108	59	25	30	2.299	1.183

**Internet Network Service Innovation and Customer Satisfaction** 

**TABLE 4.11** 

The findings show that majority of the respondents indicate that they are not satisfied with the following statements: their ICT internet service providers have an automatic repair system that ensures continuity of operation, as shown by a mean of 1.596; their ICT service providers

quickly restores internet when it fails, as shown by a mean of 2.188; their ICT service providers supply an alternative source of internet network to support the major one, as shown by a mean of 2.238; their ICT service provider provides an efficient internet network, as shown by a mean of 2.299; and that their ICT service providers internet network rarely fails, as shown by a mean of 2.340. A vast majority of firms believe that innovation is core to the firm's value chain and as such should be carried out internally. Haveckin (2012), investigated the level of adherence to product innovation process by the ICT contracting firms and satisfactory with the contracting firms. The results of the study showed that there is a misperception that contracting ICT is not designed encompasses innovation. The study recommended that ICT outsourcing contracts should include clauses that incentivize vendors to think about innovations regardless of the nature of the process or system outsourced.

#### **4.9 Customer Satisfaction**

The researcher also sought to determine the level of satisfaction with the type and level of outsourcing the ICT service provider provides. The respondents were requested to indicate their level of satisfaction with some statements relating the customer satisfaction. The findings were as shown in the table below. The study used the following scale as proposed by Cooper and Schidler (2003);0 to144= extremely dissatisfied;1.45 to 2.44=Not Satisfied; 2.45 to 3.44= neutral; 3.45 to 4.44= satisfied; 4.45 to 5= extremely satisfied. The mean shows where the opinion of majority lies while standard deviation shows how much the responses deviates from the mean.

# **TABLE 4.12**

# **Customer Satisfaction**

Statements	Extremely Dissatisfied	Not Satisfied	Neutral	Satisfied	Extremely Satisfied	Mean	Std. Deviation
Our ICT service provider ensures we do not have much needed internet network	96	146	27	43	12	2.164	1.027
Our ICT service provider performs their services at the right time	102	130	42	35	15	2.170	1.005
Our ICT service providers keep proper records about the service they provide	124	89	52	20	37	2.231	0.829
Our ICT service provider provides quality services	130	134	34	24	2	1.870	1.012
The employees of our ICT service provider respond to our needs promptly	102	111	55	26	30	2.293	1.127
Our ICT service provider have modern equipment's with which they provide	136	82	38	34	34	2.222	1.086
The overall quality of service provided by our ICT service provider is excellent	98	144	25	45	12	2.104	0.829

The findings from the table show that majority of the respondents showed dissatisfaction on: the quality of services delivered by the ICT service provider, as shown by a mean of 1.870; the overall quality of services provided, as shown by a mean of 2.104; their ICT service provider ensures they have the needed internet network, as shown by a mean of 2.164; right timing of services provided by the ICT service provider, as shown by a mean of 2.170; their ICT service providers keep proper records about the service they provide, as shown by a mean of 2.231; ICT service provider have modern equipment's with which they provide them with the services they require from them, as shown by a mean of 2.222; and employees of the ICT service provider respond to their needs promptly, as shown by a mean of 2.293.

# **TABLE 4.13**

# **Model Summary**

Model	Model R R Square		Adjusted R Square	Std. Error of the Estimate
1	.861ª	.741	.729	.03820

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings, the value of adjusted R squared was 0.729 an indication that there was variation of 72.9% on customer satisfaction due to changes in information communication technology outsourced innovations, at 95% confidence interval. This shows that 72.9% changes on customer satisfaction could be explained for by changes in after sale service innovation, 24-hours help-desk services innovation and internet network service innovation. R is the correlation coefficient which shows the relationship between the study variables. From the findings, the study found that there was a strong positive relationship between the study variables as shown by 0.861.

#### **TABLE 4.14**

## **Analysis of Variance**

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Residual	2.94	3	0.980	14.404	.002 <sup>b</sup>
	Regression	21.76	320	0.068		
	Total	24.7	323			

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.02 which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. The calculated value was greater than the critical value (2.84<14.404) an indication that after sale service

innovation, 24-hours help-desk services innovation and internet network service innovation significantly affect customer satisfaction. The significance value was less than 0.05, an indication that the model was statistically significant.

# **TABLE 4.15**

# Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta	_	
1	Constant	1.783	0.453		3.936	.001
	After Sale Service	0.432	0.157	.297	2.752	.009
	24-Hour Help Desk Service	0.511	0.188	.131	2.718	.004
	Internet Network Service	0.453	0.142	.186	3.190	.012

From the data in the above table the established regression equation was

# $Y = 1.783 + 0.432 \ X_1 + 0.511 \ X_2 + 0.453 \ X_3$

From the above regression equation it was revealed that holding After Sale Service, 24-Hour Help Desk Service and Internet Network Service innovations to a constant zero, customer satisfaction would be at 1.783, a unit increase in effective after sale service innovation would lead to an increase in customer satisfaction by a factor of 43.2%, a unit increase in effective 24-hour help desk services would lead to an increase in customer satisfaction by a factor of 51.1% and a unit increase in improved internet network services would lead to increase in customer satisfaction by a factor of 45.3%.

The study findings are in agreement with those of Dahlberg (2016) who stated that ICT service providers are faced by numerous challenges in terms of satisfying their customers. According to him, the service providers should enforce new ways to cope with new challenges but such changes should restrict the ability to tackle the performance and economic pressures on the ICT industry today. Instead, they should ensure openness and competitiveness of the market, ability

to innovate while respecting important principles such as the accessibility and the right to free expression by customers.

Further ICT service providers have to make ever tougher decisions on where to invest and when. This study has found out that a 24-Hour Help Desk Service and a reliable Internet Network Service should be given much preference by the service providers.

#### **CHAPTER FIVE**

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

# **5.1 Introduction**

This chapter presents the summary of the key data findings from the study, draws conclusion from the findings and makes appropriate recommendation. The conclusions and recommendations drawn were focused on addressing the objective of the study. The study intended to assess the effects of after sale service innovation on customer satisfaction in the service industry, to determine the effects of 24-hour help-desk services innovation on customer satisfaction in the service industry and to establish the effect of internet network service innovation on customer satisfaction in the service industry.

# **5.2 Summary of the Findings**

The general objective of this study was to analyses the effect of information communication technology outsourced innovations on customer satisfaction in the service industry, Nairobi Kenya. This study was guided by three specific objectives; to assess the effects of after sale service innovations on customer satisfaction in the service industry; to analyse the effects of 24-hour help desk innovation services on customer satisfaction in the service industry and to find out the effects of internet network innovations on customer satisfaction in the service industry.

The study adopted a descriptive research design. The population of interest of this study was all firms in the service sector, operating in Nairobi Central Business District that outsource the ICT services. The population of the study included all 1202 registered businesses operating in the service sector segment. From the population of 1202, the study took 33.3% of the population of the entire population. In total, the sample size for this study was 400 firms. This study utilized a

questionnaire to collect primary data from the sample size selected. Data collected was quantitative in nature which was coded to enable the responses to be grouped into various categories. Quantitative data was summarized using descriptive statistics. SPSS (Version 21) was used to analyse the data. Inferential statistics were used to generate a Linear Regression Model.

# 5.2.1 After Sale Service Innovations and Customer Satisfaction

The researchers sought to establish the effects of after sale service innovations on customer satisfaction. From the findings, the research found majority of the respondents were not satisfied with innovativeness of: system installation by the ICT service providers (37%), methods of system repair by the ICT service providers (30%) methods of system maintenance by the ICT service providers (31%) as well as ICT after sale services (39%). Majority of the respondents also indicated that compared to their ideal ICT service providers, they are not satisfied with the performance of the providers they currently have. These findings are showing that ICT service providers are not meeting the needs of most firms as expected.

The findings concur with those of Reinartz and Lelong (2012) who stated that smaller and local ICT service providers have tried to cope with this competition in various ways. One common way is to provide integrated solutions bundling several after sale service innovations. They also found that primary determinants for the success of an after-sale service innovation by the service providers were the awareness of the external market, the development process and the firm's strategic and business fit.

The findings are also in line with Goyal and Pitt (2013) who revealed that after sale service innovations were achieved by partnering between organisations maximise the opportunity to think and act beyond an organisation boundaries, bringing together aspirations, skills and

knowledge of all stakeholders involved who work to gain profits and competitive advantage in ICT industry. They conclude that after sale service ICT innovation should be a mindset and not a one-time event. Innovation management principles should be incorporated as a part of daily schedule for each employee at all levels, strategic, tactic and operational.

# 5.2.2 24-Hour Help-Desk Services Innovation and Customer Satisfaction

The researcher further sought to establish the effects of 24-hour help-desk service innovations on customer satisfaction. The finding revealed that majority of the respondents were not satisfied with the statements that 24-hour help-desk: hardly breaks down (32%), innovation is sufficient for organization needs (35%), breakdown is resolved within a very short time (31%), innovation is easy to use, always help organization to communicate effectively and is toll free (30%).

The findings are in line with those of Nuckles and Ertelt (2014) who notes that in a multi-level service desk environment, customers can directly contact the service desk via different types of media, i.e. email, telephone, web form, fax, instant messaging, SMS etc. If the customer inquiry is simple and straightforward, the first level service desk representative will resolve the issue. However, as the complexity of the issue increases the representatives have to escalate the inquiry until it is resolved. According to Kumar (2010) customers are the lifeblood of any business. Customer care therefore is paramount. The ways in which services to publish can be improved are numerous and organizations should incur considerable expense researching then servicing image and reputation.

#### 5.2.3 Internet Network Service Innovation and Customer Satisfaction

The researcher also sought to determine the effects of internet network service innovations on customer satisfaction. The respondents were requested to indicate their level of satisfaction with some statements relating to the effects of internet network service innovation on customer satisfaction. From the findings, majority of the respondents indicate that they are not satisfied with the following statements: their ICT internet service providers have an automatic repair system that ensures continuity of operation(52%), their ICT service providers quickly restores internet when it fails (30%), their ICT service providers supply an alternative source of internet network to support the major one (39%), their ICT service provider provides an efficient internet network and that their ICT service providers internet network rarely fails (31%). A vast majority of firms believe that innovation is core to the firm's value chain and as such should be carried out internally.

The findings are in line with those of Haveckin (2012) who investigated the level of adherence to product innovation process by the ICT contracting firms and satisfactory with the contracting firms. The results of the study showed that there is a misperception that contracting ICT is not designed encompasses innovation. The study recommended that ICT outsourcing contracts should include clauses that incentivize vendors to think about innovations regardless of the nature of the process or system outsourced. The findings are also in line with those of Kishore, et al, (2009) investigated the satisfactory levels with the outsourcing firms in relation to continuous process innovation. The study concluded that majority of the client firms in this survey expect vendors to either turn ideas into improved processes, transform existing products, help transform existing processes or help turn ideas into new products.

# **5.3 Discussions of the Findings**

The study findings were further presented in this section.

# 5.3.1 After Sale Service Innovations and Customer Satisfaction

This study revealed that customers were not satisfied with innovativeness of: system installation by the ICT service providers and this was represented by a mean of 2. 034. This was followed by the statement on methods of system repair by the ICT service providers as represented by a mean of 2.302 and finally the statement on methods of system maintenance by the ICT service providers as shown by a mean of 2.330. These findings are showing that ICT service providers are not meeting the needs of most firms as expected. This is consistent with the findings of Wang and Yang (2007) who quoted only a 33% satisfaction rate with outsourced IT services. Loh & Venkatraman (2012) also suggested a negative relationship between IT performances and outsourcing that was also empirically supported. They also noted that low economic returns on IT investment appear to affect the propensity of firms to outsource more of their IT infrastructure to vendors. According to them, organisations have failed to document substantial productivity improvements and those productivity statistics that do exist have yet to prove that offshore outsourcing works for these organizations.

# 5.3.2 24-Hour Help-Desk Services Innovation and Customer Satisfaction

On 24hour help desk service innovation, the study revealed that customers were not satisfied with the statements that 24-hour help-desk: hardly breaks down, as represented by a mean of 2.108; followed by statement on innovation is sufficient for organization needs, as represented by a mean of 2.204 and finally breakdown is resolved within a very short time, as represented by a mean of 2.272. According to Kumar (2010) customers are the lifeblood of any business.

Customer care therefore is paramount. From these findings, firms are so far discontent with the 24-hour help desk innovations provided by the ICT service providers. Davidson (2014) warns that customers who are not given an opportunity to business can do damage to the organization by the word of mouth, because of influence they have on the existing potential customers. According to him, complaints department is essential for the success in any service business responsive to complaints and diligent in finding out facts.

#### 5.3.3 Internet Network Service Innovation and Customer Satisfaction

On the third objective, the study revealed that customers indicate that they are not satisfied with the following statements: their ICT internet service providers have an automatic repair system that ensures continuity of operation, as shown by a mean of 1.596; their ICT service providers quickly restores internet when it fails, as shown by a mean of 2.188; their ICT service providers supply an alternative source of internet network to support the major one, as shown by a mean of 2.238. A vast majority of firms believe that innovation is core to the firm's value chain and as such should be carried out internally. Haveckin (2012), investigated the level of adherence to product innovation process by the ICT contracting firms and satisfactory with the contracting firms. The results of the study showed that there is a misperception that contracting ICT is not designed encompasses innovation. The study recommended that ICT outsourcing contracts should include clauses that incentivize vendors to think about innovations regardless of the nature of the process or system outsourced.

From the findings, the value of adjusted R squared was 0.729 an indication that there was variation of 72.9% on customer satisfaction due to changes in information communication technology outsourced innovations, at 95% confidence interval. This shows that 72.9% changes on customer satisfaction could be explained for by changes in after sale service innovation, 24-

hours help-desk services innovation and internet network service innovation. From the data in the previous chapter, the established regression equation was;  $Y = 1.783 + 0.432 X_1 + 0.511 X_2 + 0.453 X_3$ 

The study findings are in agreement with those of Dahlberg (2016) who stated that ICT service providers are faced by numerous challenges in terms of satisfying their customers. According to him, the service providers should enforce new ways to cope with new challenges but such changes should restrict the ability to tackle the performance and economic pressures on the ICT industry today. Instead, they should ensure openness and competitiveness of the market, ability to innovate while respecting important principles such as the accessibility and the right to free expression by customers. Further ICT service providers have to make ever tougher decisions on where to invest and when. This study has found out that a 24-Hour Help Desk Service and a reliable Internet Network Service should be given much preference by the service providers.

# **5.4 Conclusion**

From the findings, efficient after sale service innovations positively affect customer satisfaction in any organization. The study therefore concludes that customers will be more satisfied with after sale services that are innovative enough hence making it easier to solve problems that may arise after installing of services.

The findings also revealed that an efficient 24-hour help desk service can positively influence customer satisfaction. The study concludes that a toll free 24-hour desk help service that's is easy to use and with not communication breakdown would go a long way in helping address the customers issues regardless of the time.

Further conclusions can also be drawn that failure of internet connectivity can to a large extent lower customer satisfaction in an organization. Firms with an efficient internet network are always in a better position to serve their customers as opposed to their counterparts.

# **5.5 Recommendations**

The study recommends that ICT service providers should ensure they are more innovative in the service offering by trying to provide integrated solutions to their clients. Also, instead of having a one-time form of solution, the ICT service providers should come up with ways of working which are more of mindset and sustainable to the firms. This will go a long way in helping the firms reap the full benefits of outsourcing the ICT services.

There is need for the ICT service providers to ensure that the interaction with customers at the help desk is such that the customer's needs are understood and solutions are provided. This is because customer care is very vital to any organization. Customers who are not given an opportunity to business can do damage to the organization just by the word of mouth, because of influence they have on the existing potential customers. Therefore, existing customer need to be satisfied with the services offered by an organization.

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## **APPENDICES**

## **APPENDIX I**

# **INTRODUCTION LETTER**

Mercy Chebet

P.O. Box

<u>Nairobi</u>

Dear Respondent,

## **<u>Re: Data collection for research study</u>**

I am a student at KCA University. I am conducting an investigation to analyze the effect of information communication technology outsourced innovations on customer satisfaction in the service industry, Nairobi County Kenya. Please answer the following questions honestly and objectively to the best of your knowledge, the information obtained will be treated with strict confidentiality. Please do not write your name on the questionnaire. Thank you for your acceptance and support.

Yours Faithfully

**Mercy Chebet** 

# **APPENDIX II**

## **QUESTIONNAIRE**

## **SECTION I: DEMOGRAPHICS**

1.What is your gender?

Male [ ] Female [ ]

2. What is your age bracket?

Below 25 years [ ] 25-35 years [ ] 36 – 45 years [ ]

46-50 years [] Above 50 years []

3. What is your highest level of education?

Certificate [] Diploma [] Bachelor's degree[] Masters and above []

4. How long has your organization been in existence?

Less than 2 years [] 2-6 years [] 7 – 10 years [] more than 10 years []

5.Indicate the number of times you have ever outsourced ICT services from the following providers?

	ICT Service Provider	Once	Twice	3 Times	4 Times	Over 4 Times
1	Safaricom					
2	Airtel					
3	Orange Telcom					
4	Skyweb					
5	Evans And Kentech Data					
6	Jamii Telcom					
7	Kinde Engineers					
8	Accesskenya Group					
9	Afribit Online					
10	Almond Communications					
11	Alphabit Technologies					
12	Alphajiri Kenya					
13	Altech Technologies					
	Alternative Technology					
14	Supplies					
15	Alwan Communications Ltd					

	Amiran Communications			
16	Ltd			
17	Andest Bites			
18	Armaco Kenya Ltd			
	Any			
19	other			

# SECTION II: EFFECTS OF AFTER SALE SERVICE INNOVATIONS ON CUSTOMER SATISFACTION

7. The research aim to establish the effect of after sale service innovations on customer satisfaction? [1-extremely dissatisfied, 2- not satisfied, 3-neutral, 4- satisfied, 5-extremely satisfied]

	Statements		2	3	4	5
1	ICT after sale services are very innovative					
2	ICT service providers system installation methods are quite innovative					
3	ICT service providers methods of system repair are quite innovative					
4	ICT provider's methods of systems maintenance are quite innovative					
5	Compared to my ideal, I am satisfied with the performance of this provider					
6	ICT service providers methods of systems change-over are quite					
	innovative					

# SECTION III: ESTABLISH THE EFFECTS OF 24 HOUR HELP DESK INNOVATIONS ON CUSTOMER SATISFACTION

8. The research aims to establish the effects of 24-hour help desk innovations on customer satisfaction? [1-extremely dissatisfied, 2- not satisfied, 3-neutral, 4- satisfied, 5-extremely satisfied]

	Statement	1	2	3	4	5
7	7 The 24-hour help desk always help the organisation to communicate effectively					
8	The 24-hour help desk hardly breaks down					
9	The 24-hour help desk breakdown is resolved within a very short time					
10	The 24-hour help desk innovation is easy to use					
11	The 24-hour help desk innovation is sufficient for organisation needs					
12	The 24-hour help desk is toll free					

# SECTION IV: ESTABLISH THE EXTENT TO WHICH INTERNET NETWORK INNOVATIONS AFFECTS CUSTOMER SATISFACTION

**9.** The research aims to establish the extent to which internet network innovations affects customer satisfaction? [1-extremely dissatisfied, 2- not satisfied, 3-neutral, 4- satisfied, 5- extremely satisfied]

	Statement	1	2	3	4	5
13	Our ICT service providers internet network rarely fails					
14	Our ICT service providers internet is quickly restored when it fails					
15	Our ICT service providers supply an alternative source of internet network to support the major one					
16	Our ICT service providers internet has an automatic repair system that ensures continuity of operation					
17	Generally, our ICT service provider provides an efficient internet network					

# SECTION VI: CUSTOMER SATISFACTION

10.The research aims to establish the extent to which the customer is satisfied with the type and level of outsourcing the ICT service provider provides? [1-extremely dissatisfied, 2- not satisfied, 3-neutral, 4- satisfied, 5-extremely satisfied]

		1	2	3	4	5
18	Our ICT service provider ensures we do not have much needed					
	internet network					
19	Our ICT service provider performs their services at the right time					
20	Our ICT service providers keep proper records about the service they					
	provide					
21	Our ICT service provider provides quality services					
22	The employees of our ICT service provider respond to our needs					
	promptly					
23	Our ICT service provider have modern equipment's with which they					
	provide us with the services we require from them					
24	The overall quality of service provided by our ICT service provider is					
	excellent					

# THANK YOU AND GOD BLESS YOU

#### **APPENDIX III**

## **INTRODUCTION LETTER**



Thika Road, Ruaraka P.O. Box 56808-00200 Nairobi Kenya Pilot Line: +254 20 8070408/9

Tel: +254 20 3537842 Fax: +254 20 8561077 Mobile: +254 734 888022, 710 888022 Email: kca@kca.ac.ke Website: www.kcca.ac.ke

KCAU/SGS/MSc/August.17/4

August 15, 2017

To whom it may concern,

Dear Sir/Madam,

#### RE: MERCY CHEBET REG. NO. 15/05843

It is my distinct pleasure to introduce to you Ms. Mercy Chebet who is a student in our institution pursuing a Master of Business Administration at the School of Business and Public Management.

Mercy is conducting research on a topic titled: *Effect of ICT Outsourcing Service Innovation on Customer Satisfaction in Service Industry, Nairobi County Kenya''* which is part of the requirements of the program she is pursuing. The research as well as the data procured thereof shall be used for academic purposes only.

Any assistance accorded to her is highly appreciated.

In case of further inquiry, do not hesitate to contact the undersigned.

Yours faithfully/ ERSIT

Ag. Dean, School of Graduate Studies & Research

# **APPENDIX IV**

# LIST OF FIRMS INTERVIEWED

Acorn +A1:E44Group	AAR Insurance Kenya		
BBOXX Kenya Limited	Africa Merchant Assurance Company – AMACO		
Bridge International Academies	AIG Kenya Insurance Company		
Azuri Technologies Limited	APA Insurance – Part of Apollo Investments Company		
BitPesa	Apollo Life Assurance		
Komaza (Novastar, Kenya)	Aramati Safaris		
Коро Коро	Archers Tours & Travel Ltd.		
Landmark Africa	As You Like It (Safaris) Ltd		
Lendable	AsaRay Tours Ltd - Msa		
Maarifa Education Holdings	Asili Adventure Safaris		
Mentor Management Limited	Asilia Kenya Ltd		
Micro-Energy Credits	Aslan Adventure Tours & Travel Ltd		
М-Кора	Australken Tours & Travel Ltd		
M-LAW SERVICES	Avenue Service Station		
Mount Kenya Gardens Limited	Baisy Oryx Tours Travel & Safaris		
One Degree Solar	Balloon Safaris Ltd		
Penda Health (Novastar, Kenya)	BCD Travel		
Poa	Bellafric Expeditions Ltd.		
Porini Ltd	Benroso Safaris Ltd		
Redavia	Bestway Holidays Ltd		
Sanergy (Novastar, Kenya)	Big Five Tours & Safaris Ltd		
Sendy Limited	Big Safari Services Ltd		
Shop Soko	Bill Winter Safaris		
SunCulture	Boma Travel Services Ltd		
Suntransfer Kenya Investment Limited	Bongo Asili Cultural Travels		
Brookside Dairy Limited	British-American Insurance Company Kenya Limited		
Telkom Kenya	Brogibro Company Ltd		
UAP Holdings	Bunson Travel Service Ltd		
Umati Capital Limited	Bush and Beyond Ltd		
VAELL Kenya	Bush Company Ltd		

Village Industrial Power	BushBlazers Tours Travel & Safaris Ltd
Wananchi	Bushbuck Adventures Ltd
Western Seed Co. Limited	Bushtroop Tours & Safaris
Cellulant	Buymore Adventures
Chandaria industries	Call of Africa Safaris
Craft silicon	Campofrio Safaris Ltd
Cross Boundary Energy	Cannon Assurance Company Limited
D.light	Capex Life Assurance Company
Davis & Shirtliff Ltd	CIC General Insurance
Eaton Towers	CIC Life Assurance
Envirofit	Continental Reinsurance
Factor(E) Ventures	Corporate Insurance Company
Future Pump Kenya Limited	Directline Assurance Company
Globeleq	East Africa Reinsurance Company
Globology	Fidelity Shield Insurance Company
Gro Intelligence	First Assurance Kenya Limited
Kenya commercial bank	GA Insurance Company
Kenya Highland Seed Co. Limited	Geminia Insurance Company
Kiboko Holdings Limited	ICEA LION General Insurance Company
Kisima Farms Limited	ICEA LION Life Assurance Company
Equity	Intra Africa Assurance Company
Java House	Invesco Assurance Company
standard chartered bank	Kenindia Assurance Company

Africa Tea Brokers	Airtouch Cooling Systems	Africa Celebrity Tours & Travel Ltd
Avtech Systems	Alpine Coolers	Africa Journeys Escapes
BBC Auto Spares	Axel Engineering and Manufacturing	Africa Last Minute Ltd - Msa
Biselex Kenya	Biodeal Laboratories	Africa Partners in Safari Ltd
Brown's Cheese - Sunpower Products	Catalyst Travels	Africa Travel Consultants Ltd
Canon Aluminium Fabricators	Chemserve Cleaning Services	Africa Untamed Wilderness Adventures Ltd
Charleston Travel	Chuma Fabricators	Africa Visa Travel Services Ltd
Chemicals & School	Circuit Business	African Dew Tours & Travel
Supplies	Systems	Ltd

Complast Industries	Creative Edge	African Eco-Safaris
Computer Planet	Desbro Engineering	African Eden Ltd
Dawa Limited	Dharamshi Lakhamshi & Co	African Grand Expeditions Ltd
Furniture International	East African Elevator Company	African Home Adventure Ltd
Ganatra Plant & Equipment	Eggen Joinex	African Horizons Travel & Safaris Ltd
Gap Marketing	Eurocon Tiles Products	African Latitude (Kenya) Ltd
General Aluminium Fabricators	Faram East Africa	African Memorable Safaris - Msa
HealthCare Direct (K)	Gina Din Corporate Communications	African Quest Safaris Ltd
Hebatullah Bros	Global Trade Marketplace	African Road Safaris
Homart (Nairobi Garments	Hardware and Welding Supplies	African Route Safaris-Msa
InvesteQ CAPITAL	Kandia Fresh Produce Suppliers	African Safari Destinations Ltd
Jungle Nuts Ltd	Kevian Kenya	African Sermon Safaris
Kema (E.A.) Ltd	Kinpash Enterprises	African Trotter Expeditions
Kenbro Industries	Limelight Creations	All Seasons Safaris and Tours
Kentons Limited	Madhupaper Kenya	All Time Safaris Ltd
LANTech(Africa)	Marketpower International	Aloha Tours & Safaris
Lee Construction	Nationwide Electrical Industries	Animal World Safaris Ltd
Master Power Systems	Panesar's Kenya	Anste Tours & Travel Limited
Muranga Forwarders	Parapet Cleaning Services	Apollo Tours & Travel
Oasis Limited	Prafulchandra & Brothers	Catalyst Travels Ltd
OptiWare Communications	Premier Industries	Centurion Travel & Tours Ltd
Pelican Signs	Professional Clean Care	Chameleon Tours
Pentapharm Ltd	Rangechem Pharmaceuticals	Charleston Travel Ltd
PG Bison (Kenya) Ltd	Rongai Workshop & Transport	Cheli & Peacock Ltd
Planning Interiors	R & R Plastics	CKC Tours & Travel
Printfast Kenya	Sahajanand Enterprises	Classic Safaris
Radar Limited	Shikara Limited	Concorde Car Hire & Safaris Ltd

Sai Pharmaceuticals	Skylark Creative Products	Continental Travel Group
Satguru Travels and Tours	Specialized Aluminium Renovators(SARL)	Cosmic Safaris Ltd
SBO Research	Stoic Company	Cotts Travel & Tours Ltd
Seasons Restaurants & Hotels	The Phoenix	Custom Safaris
Sheffield Steel Systems	Tiger Brands (K)	David Tours & Car Hire-Msa
Silverbird Travel Plus	Toolcrafts Limited	Deans Travel Centre Ltd-Msa
Software Technologies	Travelshoppe Company	Designer Tours & Travel
Spice World	Union Logistics	Destination Africa dmc Ltd
Trans Business Machines	Varsani Brake Lining	Destination Kenya Ltd
Transport and Lifting Services	Virgin Tours	Discover Kenya Safaris Ltd
Tyremasters Limited	Viva Productline	Diwaka Tours & Travel Ltd
University of Nairobi Ent. & Services	Waumini Insurance Brokers	
Vajra Drill	Wines Of the World	
Victoria Furnitures	Zaverchand Punja	
Warren Enterprises		