

**FACTORS INFLUENCING CUSTOMER SATISFACTION WITH
SERVICE PROVISION BY KENYA POWER COMPANY: A
CASE OF NAIROBI COUNTY, KENYA**

BY

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**This Research Project Report Submitted In Partial Fulfillment Of The Requirements For
The Award Of The Degree Of Master Of Arts In Project Planning And Management Of
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DECLARATION

This research project report is my original work that has not been presented to any other Institution of Higher Learning.

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DEDICATION

This work is dedicated to my mother, Lydia Akaranga, who has been a constant source of support and encouragement during the challenges of school and life. She has taught me to work hard for the things I aspire to achieve. I am truly grateful for having you in my life.

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ABBREVIATIONS AND ACRONYMS

GW:	Gigawatts
ISO:	The International Organization for Standardization
IEA:	The International Energy Agency
RPV:	Relative Perceived Value
SPSS:	Statistical Package for Social Sciences
TV:	Television
UNIPEDA:	The association of the European Electricity Supply Industry and of worldwide affiliates

ABSTRACT

Kenya Power is a limited liability company that is the sole distributor of electricity in Kenya. However, its image in the public is tainted with bad customer reviews because of constant blackouts, death and destruction of property due to electrical faults, bad customer relations and delays in provision of service. One of the most important marketing strategies in the 21st century is provision of customer satisfaction. However, it is evident that customers are not satisfied with the services of Kenya Power. The purpose of this study was to establish the factors affecting customer satisfaction with Kenya Power and the objectives were: to establish the influence of communication techniques on customer satisfaction with Kenya Power Company in Nairobi County, to investigate the influence of reliability of power supply on customer satisfaction with Kenya Power Company in Nairobi County, to establish the influence of cost of electricity on customer satisfaction with Kenya Power Company in Nairobi County and to establish the influence of innovation of new products on customer satisfaction with Kenya Power Company in Nairobi County. The research design used was descriptive research method. The instruments of data collection were questionnaires. Reliability was achieved by the use of the split-half method which involves splitting the test in two and comparing the results of each half. The results were consistent therefore the test is considered reliable. Construct validity was ensured by engaging a panel of experts - project supervisor and department lecturers who were familiar with the topic to examine the items and decide what specific variables it is intended to measure. The research was done in Nairobi County which has a total of 1.35Million Kenya Power Company customers. The sampling design employed was simple stratified sampling. Stratified sampling provides the researcher a way to achieve even greater representativeness in the sample of the population. This was accomplished by selecting individuals at random from the subgroup in proportion to the actual size of the group in the total population. The sample size obtained is a total number of 384 respondents. The procedure of data collection used was handing out questionnaires to the selected participants and giving them three days to fill the questionnaires accurately and truthfully and then collecting them from the participants. This was done over a period of two weeks. The data was then analyzed over a period of one month by first checking for errors, then tabulating results, calculating percentages and then reporting the findings descriptively. The results were tabulated with the help of the Statistical Package for Social Sciences (SPSS) that has data handling and statistical analysis capability and generates descriptive statistics such as frequency, percentages, means and standard deviations. The findings of the research were that the respondents were not satisfied with the services provided by Kenya Power Company. The customers were not aware of some of its innovations because the communication techniques used were not effective. The customers also complained of lack of reliability of power supply and high cost of electricity. The recommendation made by the researcher was that the company needs to use more effective communication techniques such as TV to communicate new innovations and power interruptions. Another recommendation was that the company should device ways to switch customers automatically to an alternative power line in case of power interruption. In conclusion, the study found out that communication techniques, reliability of electricity supply, cost of electricity and innovation of new products greatly affects customer satisfaction with service provision by Kenya Power Company.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Kenya Power is the only company which transmits, distributes and retails electricity to customers throughout Kenya. Statistics from Kenya Power show that electricity demand has grown drastically over the last few years (Kinyua, 2010). In support of the global transition to a new energy architecture, the World Economic Forum released the Global Energy Architecture Performance Index Report 2014. Ranking was done using the three sides of the energy triangle; environment sustainability, security of supply and affordability. Topping the list was Norway in first place, followed by New Zealand and then France. South Africa was the top African country coming in at No. 54 (Global Energy Architecture Performance Index Report, 2014). The report finds that many developing countries struggle to supply electricity to their citizens partly being influenced by over-dependence on imports to meet more than half of their energy needs.

The main reason that Norway tops the list is that 96% of their energy production is based on hydro-electric power and only 4% on the conventional thermal production methods, wind production and biomass production (Norwegian Petroleum Directorate, 2010). The Norwegian transmission and distribution grid consists of over-head lines, underground and submarine cables (IEA Key World Energy Statistics, 2013). Another factor that puts Norway at the top of the list is allowing consumers the right to choose their supplier (Norwegian Ministry of Energy and Petroleum, 2013). If the customer is not satisfied with one company's service, all he or she has to do is write down the date, the numbers indicated on the meter and choose and sign a new contract with another company for free. This competition ensures companies provide quality supply so as not to lose customers. In Africa, South Africa tops the list as it has diversified its sources of energy from almost purely coal to now include solar and wind. Independent power producers have also been introduced contributing to the country's broad energy production mix (Integrated Resource Plan, 2010).

Netherlands is also a good example to emulate in terms of energy supply. The production of electricity in the Netherlands continues to grow, with an expected increase in production capacity of 13 GW during the period up to 2019 (IEA Key World Energy Statistics Statistics, 2013). This is apparent from the Security of Supply Monitoring Report (2014), an annual overview compiled

by electricity transmission operator TenneT for the Dutch Ministry of Economic Affairs, Agriculture and Innovation. The report also shows that the Netherlands is playing an increasingly important role in the energy market in Northwest Europe market in safeguarding the security of supply and facilitating the transition to a sustainable energy supply (IEA Key Statistics, 2010). As the electricity market in Northwest Europe continues to develop, the attractiveness of the Netherlands as a location is increasingly emerging as a prominent factor in producers' investment plans. The growth in production capacity is also leading to more export opportunities. This development is one of the reasons behind TenneT's expansion of its transmission grid. Furthermore, the electricity transmission operator is working on new interconnectors (The Netherlands Authority for Consumers and Markets, 2014). A provisional decision on a fourth interconnector with Germany was published in July 2012. Completion of this line will result in an increase of 1.5 GW in the total interconnection capacity.

Finally, studies into new subsea cable links to Norway and Denmark are currently being carried out. The aforementioned interconnectors play a key role in the European energy market, particularly in facilitating the transition to a sustainable energy supply. In late May 2012, for instance, high production of solar and wind energy in Germany led to maximum exports to the Netherlands (Wind in Power European Statistics, 2010). During periods of decreased supply of renewable energy, the interconnectors are used to export large amounts of electricity generated in the Netherlands. This happened in February 2012, for instance, when exports to Germany peaked during a period of particularly cold weather.

Kenya performed poorly and came in at No. 109 in the Global Energy Architecture Performance Index Report 2014. One of the reasons for its poor performance is the lack of diversity in sources of production of power. Kenya relies majorly on hydroelectricity which poses a problem during drought. In such cases, Kenya Power is forced to ration power for its customers. Another reason for the poor performance is numerous overhead lines which are easily affected by strong winds and rains. With Kenya Power's slow response to emergencies, customers are often faced with long periods of power blackouts. Customer satisfaction has therefore not been achieved by the company therefore it was necessary to do this research and hopefully Kenya Power may use the recommendations to establish a more customer-focused approach to its core businesses (Zeithaml and Bitner, 2000).

1.2 Statement of the Problem

Although Kenya Power still remains a monopoly in distribution of electricity, the environment under which it is operating is rapidly changing and its customer base has grown forcing the company to react and implement the latest techniques in communication, reliability, cost and innovation. According to project management principles, appreciating customer satisfaction is one of the most important strategies of best performing corporate organizations (Besterfield, 2010). This is the only way to realize and maintain a loyal customer base. The goal of this work is to better understand the factors influencing customer satisfaction with service provision by Kenya Power through an in-depth study of the existing customer base. An exercise was carried out in the month of February 2014 by Kenya Power engineers to provide alternative power supply to the top 100 industries in the country. This required the engineers to get feedback from the customers on the current supply and their level of satisfaction or dissatisfaction. Overwhelmingly, majority of the customers were dissatisfied (Kenya Power Customer Care Desk, Nairobi North Division, 2014). They complained of constant blackouts, slow response to emergencies, voltage surges which damaged their equipment and high electricity bills. Previous research by Makowenga (2013) and Wakuru (2012) confirms the same sentiment; Kenya Power Company's customers are not satisfied with the services provided. This being the situation, it was necessary to determine the factors influencing customer satisfaction with service provision by Kenya Power Company and to come up with remedies for this.

1.3 Purpose of the Study

The purpose of this study was to establish the factors influencing customer satisfaction with service provision by Kenya Power Company in Nairobi County.

1.4 Objectives of the Study

This study was guided by the following objectives:

1. To establish the extent to which communication techniques influence customer satisfaction with service provision by Kenya Power Company in Nairobi County
2. To assess how reliability of power supply influences customer satisfaction with service provision by Kenya Power Company in Nairobi County

3. To determine how cost of electricity influences customer satisfaction with service provision by Kenya Power Company in Nairobi County
4. To identify how innovation of new products influences customer satisfaction with service provision by Kenya Power Company in Nairobi County

1.5 Research Questions

1. To what extent do communication techniques affect customer satisfaction with service provision by Kenya Power Company in Nairobi County?
2. How does reliability of power supply influence customer satisfaction with service provision by Kenya Power Company in Nairobi County?
3. Does cost of electricity influence customer satisfaction with service provision by Kenya Power Company in Nairobi County?
4. How does innovation of new products affect customer satisfaction with service provision by Kenya Power Company in Nairobi County?

1.6 Significance of the Study

Hopefully, this study could be of great importance to Kenya Power Company as a service-providing company. It is hoped that the results of this study could provide Kenya Power Company with an insight into the mind of the customer and in turn help the company anticipate the customer's expectations (Cranage, 2004). This might help the company to tailor their services to meet the customer's ever-evolving needs. This study could also help Kenya Power Company to increase revenue in that, upon meeting customer's needs, the company may establish a loyal base of customers in this dynamic and competitive environment and to provide quality supply to these customers (Besterfield, 2010). This could also help to attract new customers in future. In addition, this study might also benefit the nation as a whole. A stable supply of electricity enhances development in that it attracts foreign investors and in turn increases revenue for the government and provides job opportunities for the youth. In the future, this research could also guide other researchers who wish to perform an analysis of customer satisfaction with Kenya Power Company.

1.7 Delimitation of the Study

The study was carried out in Nairobi County between June 2014 and July 2014. Nairobi County was settled on because this area is one of the biggest consumers of electricity (Kenya Power Customer Care Department, 2014), it being an urban area and the capital city of Kenya. The study covered various divisions in Nairobi, as outlined by Kenya Power Company. These divisions are Nairobi West, Nairobi North and Nairobi South regions. The research focused on Kenya Power staff as one of the main respondents. The study also identified customers from these three regions to interview. The study sample was selected from the identified population adding up to 384 respondents (Krejcie and Morgan, 1998) and picked using the simple stratified sampling method. The study used primary data which was collected by the use of questionnaires.

1.8 Limitations of the Study

There were some limitations and challenges encountered in the field during the study. For one, some respondents were not willing to give any feedback because they assumed that nothing good will come out of it as previous surveys have been conducted and there was no improvement in the quality of service as their complaints were not addressed. The researcher assured them that as an employee of Kenya Power, she would relay the information to the Customer Service management and lobby for the suggested reforms to be enforced. Another challenge is that some of the respondents did not understand the questions in the questionnaire. Such participants were guided as they filled out the questionnaires. Questions that were not clear were explained. The study only included those that understand English because translating questionnaires can pose a lot of difficulty if done over a short time frame.

1.9 Assumptions of the Study

It was assumed that the data to be collected from the selected sample of participants represented the views of the majority of Kenya Power Company's customers in Nairobi and in the country at large. Another assumption made was that all the respondents answered the questions truthfully.

1.10 Definition of significant terms used in the study

Communication techniques:	This refers to the successful imparting or exchanging of information between two or more parties by speaking, writing, or using some other form of medium.
Cost of electricity:	This refers to the amount of money that has to be spent or paid to acquire electricity.
Customer satisfaction:	This is a measure of the extent to which a customer's needs are met.
Innovation of new products:	Innovation refers to the application of new, original and better solutions to meet new requirements in existing market needs e.g. through more effective products, services, processes or technology.
Reliability of power supply:	This refers to constant and stable provision of electricity supply without power interruptions and electric surges which can cause damage to electric equipment.

1.11 Organization of the Study

The study comprised of five chapters. Chapter one covered the introduction of the study which includes the background of the study, statement of the problem, purpose and objectives of the study among others. Chapter two covered the literature review which included definition of the dependent and independent variables plus their indicators. Chapter three covered the research methodology which outlines the target population, sample design used, instruments of data collection, sample size and validity and reliability of instruments used among others. Chapter four covered the data analysis, presentation, and interpretation of the results. Finally, chapter five covered the summary of the findings, discussions, conclusions, recommendations and areas of further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains the literature reviewed during this study. The concept of customer satisfaction and customer satisfaction models are discussed in depth. The variables under the study are discussed; communication techniques, cost of electricity, reliability of power supply and innovation of new products.

2.2 Customer Satisfaction with Service Provision

According to the Merriam Webster Business dictionary, a customer is defined as a party that receives or consumes goods or services and has the ability to choose between different products and suppliers. A customer can also be referred to as a consumer or a buyer (Rogers, 1995). The customer receives this product in exchange for monetary or other valuable consideration. A customer can be either internal or external. An internal customer is an employee in the organization providing the product while an external customer is the beneficiary or purchaser of the product. This is illustrated in the Figure 1.

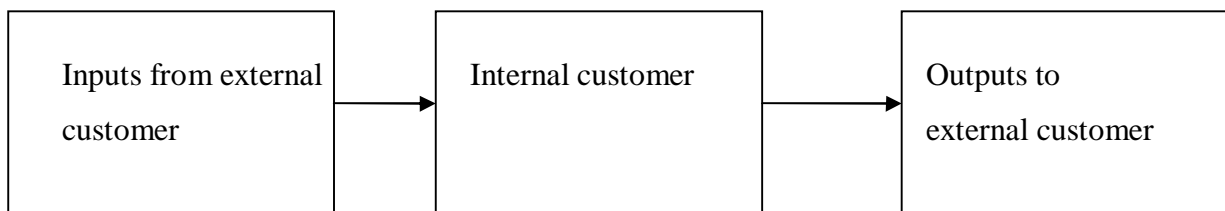


Figure 1: External and Internal Customer (Rogers, 1995)

Customer satisfaction refers to the degree or extent of satisfaction or contentment provided by the goods or services provided by the supplier. It is the degree to which the product meets or exceeds the customer's expectations (Wong, 2003). Customer satisfaction is determined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals (Chen and Popovich, 2003). It is measured by the number of repeat customers. It is however not a straight forward process to determine customer satisfaction because it varies from person to person and

there are many variables in between which are either psychological or physical or both (Communities Scotland, 2006). Therefore perception greatly affects the level of customer satisfaction (Gan, Oyeniya and Joachim, 2006). Measurement of customer satisfaction uses the analysis of customer feedback as only the customer can accurately rate satisfaction.

To achieve customer satisfaction, companies are encouraged to adhere to the ISO 9000 standards. The ISO 9000 standards are an international agreement on total quality management practices and consist of standards for this. A good quality management system should enhance customer satisfaction, address quality requirements of the customer and help an organization to comply with the relevant regulations outlined (Kandampully, 1988). ISO 9000 provides a set of standard requirements for a system regardless of the role of the organization, its size or whether it is a private or public company. Kotler and Armstrong (1999) definition of customer satisfaction involves creating, maintaining and sustaining strong relationships with customers, suppliers and employees with a goal of delivering long-term economic and social value to the stakeholders.

In total quality management, eight principles are outlined to aid organizations achieve customer satisfaction. A quality management principle is a fundamental rule for operating an organization. It is aimed at improving organization performance by focusing on customers while addressing stakeholders' concerns (Pollitt and Bouckaert, 2004). Out of the eight principles, a customer-focused organization is emphasized. A customer-focused organization depends on its customers and should hence aim to comprehend the present and future needs of the customer and work towards meeting these requirements and even exceeding them. This principle can be applied to ensure a balanced approach among customers and other stakeholders e.g. financiers and suppliers. It can also be used to measure customer satisfaction and to facilitate communication of the customer's needs throughout the organization (Watson and Akselsen, 1998). A customer-oriented organization is illustrated in a customer satisfaction pyramid. It shows the importance of each person in the organization with the customer being the most important and the CEO the least important because the product is tailored for the customer.

The Six Sigma strategy aims at improving business by eliminating mistakes and improving quality. The pioneers of Six Sigma adopted a customer-oriented approach covered in four steps; quantifying what satisfies the customer, identifying the gap between customer expectations and the company's current performance, analyzing the reasons for the gap and

developing methods to remove the gap (Kano, N and Nobuhiku S, 1984). This approach helps the company to eliminate mistakes because of doing the right things the first time. All the energy is directed towards providing solutions and this has an impact on the customer directly. Six Sigma also helps in enhancing quality by allowing the organization to make better quality products and hence enhance customer loyalty in the end. Another benefit of the Six Sigma approach is innovation. A company that understands what the customer wants is able to invent new products and hence ensure relevance in a highly competitive economy (Parasuraman, A., Berry, L. and Zeithaml, V., 1993).

Customer satisfaction can be measured using customer surveys. Customers are asked to rate the product on a scale of 1 or 5. This scale is called the Likert scale. An example is illustrated below. The customer is asked to rate a particular product by ticking the appropriate box. The typical levels for a five-level Likert scale are illustrated in Table 2.1.

Table 2.1: Likert Scale (Vagias, Wade M., 2006)

1.Extremely dissatisfied	2.Dissatisfied	3.Neither satisfied or dissatisfied	4.Satisfied	5.Extremely satisfied

A research of the UK electricity market was done by Lias (1997). The conclusion made was that customers need familiarity, security, value for money and good customer service. This was however not adequate because the researcher failed to identify the specific and major factors that contribute to good customer service such as communication and innovation. Another research conducted (Diamond, Booz·allen & Hamilton, Conference on Customers & Markets, 1998) illustrated that customers are more focused on reliability than price when it comes to customer satisfaction in the electricity supply industry. It stated that the problem faced by the supplier was the difficulty to communicate reliability of supply. However, suppliers will always claim reliability but only the customer can attest to this. Reliability breeds loyalty and trust between the customer and the supplier. Issues such as responsive emergency repair, uninterrupted power or protection against spikes can be used to rate reliability. This research is however flawed because it undermines the importance of price when it comes to customer

satisfaction. High costs are a major deterrent to customers. The most recent UNIPEDDE Lisbon convention outlines the demands of the customer as cost, choice and flexibility (Laroche, 2014). The convention failed to take into account a situation whereby there is a monopoly like in Kenya therefore no flexibility in choice of supplier.

A research submitted to the Dedan Kimathi University of Technology did a research on constraints to customer satisfaction in Kenya Power in Nyeri County (Wakuru, 2012). The research outlined quality of services, marketing strategies, innovation and capacity of employees as the factors affecting customer satisfaction. The extent to which the services met customer expectations was rated highly with majority stating that their expectations were met. Reliability was rated highly though the participants were unaware of the company's marketing strategies. Innovation was rated highly by the respondents. However, communication was rated very poorly. This research is inadequate and inaccurate in the conclusion that customers are only dissatisfied with the communication methods. A look at social media alone can attest to the fact that customers are currently complaining of response to emergencies, reliability of electricity supply i.e. constant blackouts and high prices of electricity. The official Kenya Power Facebook page is constantly flooded with customers complaining of the above issues.

A research submitted to the University of Nairobi focuses on outsourcing as a factor that affects customer satisfaction in Kenya Power (Makowenga, 2013). The aim of the study was to determine the relationship between contracted works and outsourcing procedures and customer satisfaction. The study targeted the procurement department staff as the main respondents. The finding was that outsourcing leads to effectiveness in service delivery, promotes efficiency and hence improves customer satisfaction. However, this is an insufficient analysis because the researcher focuses on the Kenya Power employees instead of focusing on the customer, the recipient of the services. The customer is the only one who is able to accurately rate customer satisfaction (Cobb-Walgren, 1995).

2.3 Communication Techniques and Customer Satisfaction with Service Provision

Webster's dictionary defines communication as conveying of knowledge or information about so as to make it known and clear. It goes on to define communication as the transmission of information, thought or feeling so that it is satisfactorily received or understood. If the information is not received or understood, communication has not taken place (Smith, 2008).

Communication can be either oral or written (Wiener, 1948). Oral communication is more effective than written because as the person conveys the information, he or she can use facial expressions and hand signals to emphasize the points. The information also reaches the recipient faster and both parties are able to discuss and change views accordingly. It is also easier to enhance a rapport and build trust. The disadvantage of oral communication is that information cannot be stored or retrieved (Mehrabian, 1972). This is not good because recipients are likely to forget the information soon after they hear it. Written communication is preferred because it provides a permanent record for future reference. It also allows both the sender and the recipient time to carefully word the communication and avoid miscommunication and misunderstandings. The disadvantage of written communication is that it is very slow. The best form of communication involves a combination of both written and oral communication.

Communication can also be classified into two categories; formal and informal (Berlo, 1960). Formal communication includes company staff meeting and departmental meetings and work group meetings. Informal communication includes brown bag gatherings and town hall meetings. Company meetings are held annually or semi-annually. They help communicate the company's ever-evolving goals to the staff. Departmental meetings can be held unexpectedly and on a regular as-need basis. Workgroup meetings are held regularly to assign tasks and review each person's performance. They are held weekly or bi-weekly. Formal meetings should have an agenda and the agenda should be communicated to members before-hand (Schramm, 1954). Brown bag gatherings are typically held during lunch hour and are casual ways to host a speaker or hold discussions. Town hall meetings are held three times a year. Faculty and staff are asked to submit questions in advance or ask in person. The questions are answered by the leadership team.

To impart information, a form of medium is used (Barnlund, 2008). These media are known as the communication channels. These include newsletters, bulletin boards, email, social media, websites, telephone, SMS, radio, television and radio or video conferencing. Printed newsletters are used when targeting a large audience on a regular basis e.g. monthly. It many contain news on new products, company policy changes, change of leadership, price changes and public events. However due to the high costs of printing paper and posting newsletters, companies are now using electronic newsletters instead. Bulletin boards can be physical or electronic. They are used to convey routine news, upcoming events and as an additional source of information (McQuail, 2000).

Email is very effective as it is fast and the response can be done immediately. It also reaches a large audience quickly and provides information in writing which cannot be disproved. However it has some disadvantages because sometimes the emails can be ignored and marked as spam. The tone used in the email may also be misunderstood by the reader. Technology can also fail and the email fails to reach the audience targeted. Social media is very popular because response is immediate and it is very interactive. Kocho (1992) notes that information technology has a large impact on organizations by changing for the better the way procedure are done. Companies are opening up Facebook pages and setting up twitter handles to interact with their customers. The sites have a dedicated person to monitor the site and answer customer queries. Websites are used to provide customers with all the relevant information about the company and its products. They also allow the public to learn of employment opportunities, find contacts and location of the organization and also read about the management board.

Telephones are everywhere in the industrialized world. It has many advantages. It is fast, convenient, and cheap in comparison with other media which use paper. Tone of voice, rate of speech and other vocal qualities helps the recipient to understand the message (Caron and Caronia, 2007). One disadvantage is telephone tag; one calls at their convenience and the recipient is not able to answer. The recipient calls later only to find the other person busy. And the cycle goes on. Another disadvantage is the expense of calling across networks or out of the country. The SMS is an extension of the telephone. With the advent of mobile telephony, short message services are increasingly becoming popular because they are cheap especially when sent in bulk to customers, they are fast and they reach a large audience in a short time. Radio is a

popular method of mass communication. It however does not allow for prompt feedback. Respondents need to use another form of communication to respond.

Radio is mostly used for advertising (Biagi, 2004). It is also cheap to communicate via radio. Television is another form of mass media. It has visual advantage over radio hence being more effective. It is used for advertizing, education and training. Messages can be recorded earlier and rechecked to ensure the intended message is communicated. Its major disadvantage is that it is expensive because good broadcasting requires good cameras which are expensive. There is also absence of feedback. Tele-conferencing/video-conferencing is a very expensive medium of communication. It is used by large organizations to conduct meetings amongst people in different geographical locations. It is used because it is fast and sometimes its cost will outweigh travel costs.

Kenya Power is slowly catching up with advances in technology although the company had been lagging behind for a good amount of time. Previously, most communication was done via tradition methods such as printed electricity bills sent by mail, complaints addressed via telephone and electricity bills being paid only over the counter. At the moment, printed internal newsletters are still in circulation though they are being phased out to be sent via company mail. In addition to traditional bulletin boards, information such as vacancies, transfers and appointments are communicated via email. Social media has also offered a good platform to interact with customers (Kenya Power IT Department, 2014). The company has a number of Facebook pages in different cities and a twitter handle. Customers are able to communicate queries and get responses instantly. Kenya Power has also set up a website where the public can access vacancies, location of the company's branches, telephone contacts, emails, new products, and new innovations and also learn about the company's management team (Kenya Power IT desk, 2104). The company has also released a number of mobile and landline customer care telephone numbers and an interactive website where all queries are addressed from power interruptions to bill inquiries. The company has also started using video-conferencing to conduct meetings with division heads across the country.

2.4 Reliability of Power Supply and Customer Satisfaction with Service Provision

Reliability of power supply can be defined as the ability to meet the electricity needs of customers even when unexpected equipment fails or other conditions reduce the amount of available power supply (Beaty and Wayne, 1978). It is a measure of the capability of electricity networks to withstand sudden disturbances or unanticipated losses in system components. This can be caused by natural or man-made events. Reliability also means maintaining adequate resources to provide customers with round-the-clock supply of electricity at the proper voltage and frequency. Reliability also involves quick response to power outages. Providing reliable electricity supply is however very difficult and requires continuous control of thousands of generators (Payne, 2008).

An energy source is deemed reliable if it generates electrical output and meets demand even at peak time (Croft and Summers, 1987). However all energy sources have weaknesses and strengths therefore electrical utility companies need to have different sources of energy to enhance electricity reliability. This is referred to as the energy mix. Energy mix is a combination of alternate energy sources such as wind, gas, solar, nuclear, coal and hydro. The greater the quantity of intermittent sources of generation, the greater the level of reliability and efficiency (McNeil, 1990). Power reliability differs for different customers due to exposure to storms, environment e.g. dense vegetation and strong winds, location of the supplying substation, overall length of the distribution line, number of underground versus overhead power lines and the age and condition of infrastructure. One of the major challenges faced by Kenya Power is lack of reliability of electricity supply. Customers experience frequent power outages, power surges which damage electric equipment and even electrocution among its employees and the public due to exposed wires and lack of following safety processes (Kemibaro, 2013). On top of this, the system operation teams are not quick enough to respond to emergencies. The reasons for the unreliability are old infrastructure, many overhead lines that are affected by strong winds, heavy rains and fallen trees, inadequate number of substations, inadequate supply of electricity from generating substations and slow response from emergency teams.

The electrical industry in Kenya relies mainly on renewable energy sources like hydro, oil and geothermal power (Kenya ó U.S. Energy Information Administration (EIA), 10th May 2013.). In 2008, total generation comprised of 50% hydro-electric power, 33% oil and 16% geothermal power. As illustrated, hydro power is the main source of electricity and that is where

reliability issues arise because of unavoidable natural occurrences such as drought. In 2008, the drought caused a decline of 9% in energy production. In such a case, over-dependency on oil as a secondary source causes an increase in cost of electricity due to high fuel prices. Geothermal power is slowly becoming a main focus because of its potential. About 4000MW of geothermal power is unexploited in Kenya (The East African, 21st September, 2013). President Uhuru Kenyatta has praised the Ministry of Energy and Petroleum for rolling out a comprehensive plan to increase the supply of reliable and affordable power in 40 months. The ministry intends to generate and inject additional 5538 megawatts into the national grid in a bid to lower the cost of power (Bloomberg L.P., 20 September 2010). The President said the roadmap provided by the ministry was realistic as it marks a major shift from the unreliable hydro and expensive thermal based power generation, to a reliable green and cheaper natural gas and large scale coal fired power plants.

Kenya power is also undergoing re-structuring after the change of guard in the office of the Managing Director and Chief Executive Officer. The new MD&CEO, Dr. Chumo, has rolled out a plan to address customer issues and improve reliability (Daily Nation, 11th June 2014). One of the improvement exercises already in place is provision of alternative supply to large power customers. Such customers will be immediately connected to an alternative power line when the one they are normally supplied from is down. This will avoid loss of millions of shillings which such large industrial companies incur during a single hour of power blackout. The devices that have been put in place do not require the operations team to work so this in turn eliminates the need of emergency response teams who usually take a long time to attend to such issues.

The company is also in the process of replacing overhead lines in the central business districts and environs with underground cables (Kenya Power Central Office, Engineering Department, 2014). Underground cables are less susceptible to faults caused by strong winds, heavy rains and fallen trees. Kenya Power is also in the process of building new substations to bring power closer to the customer (Eng. Masibo, Kenya Power 2014). Some substations that have already been commissioned are Ragati Substation in Upper Hill, Komarock Substation, Langata Substation, Eastleigh Substation and Kabete Substation just to name a few. The MD&CEO said the company has invested a total of Sh4.5 billion towards construction of substations in Githunguri, Gatundu, Kirigiti, Magumu, Rironi, Lower Kabete, Dagoretti, Uplands and the Jomo Kenyatta University of Agriculture and Technology (JKUAT) in Juja.

2.5 Cost of Electricity and Customer Satisfaction with Service Provision

The cost of electricity is a calculation of the cost of generation at the point of connection. It includes capital/waste disposal costs, cost of operation, government levies, fuel costs and maintenance costs. Some of these costs are beyond the company's control such as fuel costs and government levies (Kenya Power Tariffs, 2013-14).

The Energy Regulatory Commission plays a major role in cost determination. Its roles are to provide such information and statistics to the Minister as he may from time to time require, collect and maintain energy data, prepare indicative national energy plan, perform any other function that is incidental or consequential to its functions under the energy act or any other written law, regulate the electrical energy, petroleum and related products, renewable energy and other forms of energy, protect the interests of consumer, investor and other stakeholder interests, maintain a list of accredited energy auditors as may be prescribed and to monitor and ensure implementation of, and the observance of the principles of fair competition in the energy sector, in coordination with other statutory authorities.

It is evident that some factors that affect the cost of electricity are beyond the company's control (Reuters, November 23, 2009). Therefore it is difficult to regulate the cost of electricity internally. The cost of connecting new customers in Kenya has tripled since it was last reviewed in 2004. This has deterred potential customers and consequently reduced the company's profits. The company actually loses money every time it connects a new customer although failing to connect new customers leaves tariff increment as the only source of income for the company.

The Ministry of Energy has come to the aid of Kenya Power by offering to offset the bill to connect customers that are within the radius of 600m from a transformer. Customers beyond this radius are charged market rates. In a press statement released on August 14 2003 by Kenya Power, the company announced the cost for new connections for single phase at kshs. 34,980 and kshs. 49,080 for three phase connection. This has accelerated new connections. This in turn raised electricity access from 12% of the population to 35%. There are the core tariffs used by Kenya Power. They do not change frequently. They are illustrated in Appendices VII and VIII.

2.6 Innovation of New Products and Customer Satisfaction with Service Provision

Innovation is defined as the application of better methods to meet evolving needs in the existing market. With constant advances in technology, innovation in the electricity supply field

is inevitable and required. Innovation must always be compatible with the existing network in order to be efficient, cost effective and reliable. An innovation increases the bundle of knowledge and skills an organization has and this in turn improves customer satisfaction (Rogers, 1995). According to Kibera and Waruingi (1988), in some cases new customer needs can only be satisfied by new products. Physiological and psychological human needs change with time because of influences from other countries or within the system. Therefore companies should strive to come up with new products to meet this evolving need.

The innovation process involves a number of processes (Rogers, 1995). First is knowledge of innovation. This process involves acquisition of knowledge about the innovation and what new benefits it brings to the table i.e. cost of innovation to the company and potential savings. Then comes attitude formation towards the innovation. This involves forming an opinion about the innovation after assessing the features of the innovation. After assessment, the innovation is accepted or rejected depending on the benefits or lack thereof as determined by the assessor. Then implementation follows which is the actual use of the new product if adopted. Finally, the product is reaffirmed or confirmed.

Kenya power has come up with a number of innovative products in the recent past. One of them is prepaid meters (Kenya Power IT Department, 2014). Prepaid meters allow the customer to control their consumption of electricity. It allows you to pay as you go. A token, key or smart card is used to purchase the electricity tokens. Prepayment is a good way to control one's budget as you only use what you can afford to purchase. This is good for low or fluctuating income earners. The advantages of the prepaid meter are it can be used to control one's budget. It can sometimes be used to pay off debts/arrears if the meter is programmed to pay off debt when it is charged. There is also no need to make queues in the banking hall to pay the bill at the end of the month thus saves time and it saves the company the cost of printing bills on paper.

The disadvantage of the prepaid meter is if you cannot afford to buy tokens to recharge the meter, you will have no electricity. The meter can be set to recover arrears therefore you will have to pay for electricity and for settling the arrears the next time you purchase tokens. Another disadvantage is that the nearest charging point may not be near you. However, this has been addressed by Kenya Power with the introduction of mobile payment.

Another innovation by Kenya Power is mobile payment (KPLC, 2011). Customers can now buy prepaid tokens and pay postpaid bills via MPESA. Therefore one can pay bills via

mobile phone without leaving the house. Customers can also send a message to a toll-free number to check their electricity bills. One can also call the same number for any queries. This has enabled the company to cut costs incurred when printing electricity bills, even though some customers have not yet signed up so they still receive paper bills.

2.7 Theoretical Framework: Customer Satisfaction Models

There are various customer satisfaction models to be considered: Customer satisfaction model (CSM), Kano model and the American Customer Satisfaction Index (ACSI).

2.7.1 Customer Satisfaction Model (CSM)

Customer satisfaction is an internationally recognized need. That said, it is very difficult to measure and interpret. Companies usually use surveys to evaluate customer satisfaction periodically. The customer satisfaction model is a macro level framework that links two extended Pø i.e. people and performance (Kessler, 2003). It reflects on the effect of the traditional Pø i.e. product, price, place and promotion. CSM focuses on accumulating satisfied and profitable customers into a substantial share of the target market, meeting and even exceeding customerø expectations and getting better deals from suppliers and spreading fixed costs over a broad volume base. Figure 2 is a diagram that illustrates the Customer Satisfaction Model.

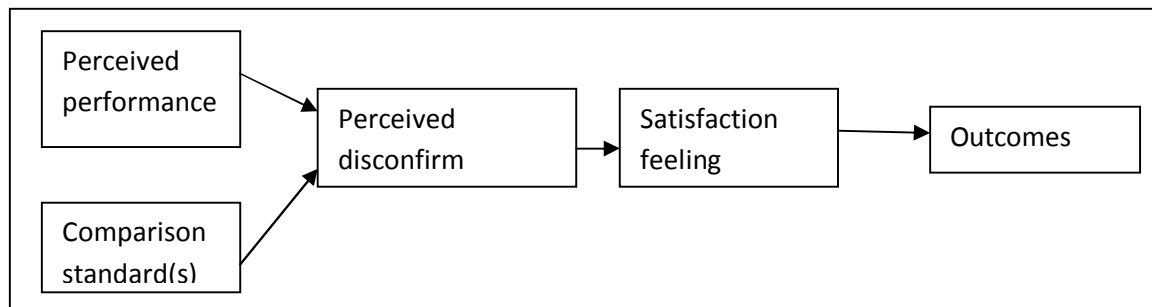


Figure 2: Customer Satisfaction Model (Woodruff & Gardial, 1996)

CSM links the essential business and marketing concepts. One of these concepts are developing high levels of satisfaction can be determined by s-curve economics i.e. it may be too expensive to provide the service required to move customers from unsatisfied to very satisfied. Companies with high market shares are more likely to be highly profitable (Westbrook, 1980). This is due to a combination of experience and a relationship with suppliers. Another concept is

that the share is directly proportional to Relative Perceived Value (RPV). RPV is also dependent on achieving customer satisfaction

2.7.2 KANO model

The Kano model was invented by Noriako Kano who was an educator, writer and consultant in the quality management field. The Kano model uses a simple ranking scheme that distinguishes the essential and differentiating factors affecting quality of a product. He challenged the belief that improving each factor can lead to improved customer satisfaction (Kano Noriaki, Nobuhiku Seraku, Fumio Takahashi and Shinichi Tsuji, April 1984). The KANO model is illustrated in Figure 3.

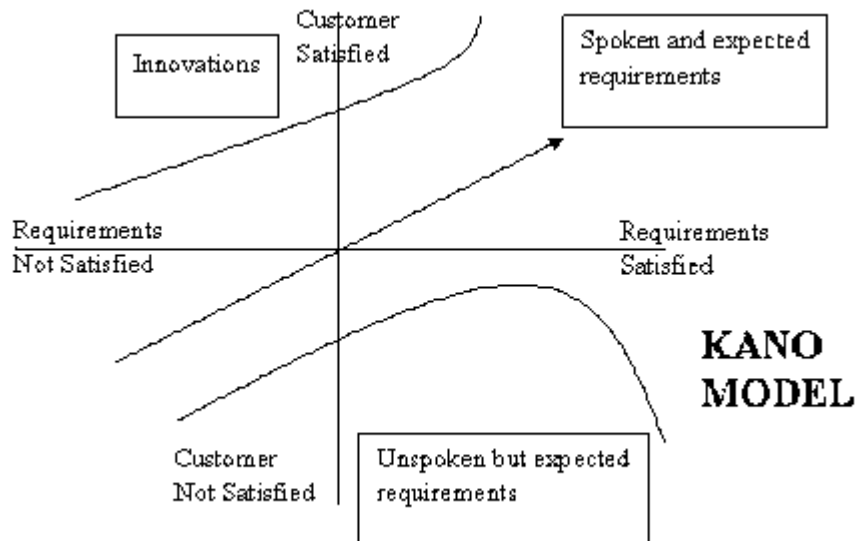


Figure 3: KANO Model (Kano, Noriaki, Nobuhiku Seraku, Fumio Takahashi and Shinichi Tsuji, April 1984).

The bottom left quadrant represents the most unsatisfied customer while the bottom right quadrant represents a complacent customer who is neither disappointed nor delighted. The top left quadrant houses a customer who is satisfied though his requirements have not been met. The customer in the top right quadrant is the happiest because his requirements have been met and he is satisfied (Cadotte, Ernest, Turgeon, Normand, 1988). The product has exceeded the customer's expectation.

The easiest way to think of the model is on a two-dimensional grid. The horizontal axis represents the input of the organization. As input increases, the organization incurs more

expenses in an aim to improve the quality. The vertical axis represents the satisfaction of the customer, moving from an extreme negative of disappointment to an extreme positive of elation (Venkitaraman and Jaworski, 1993). Kano believed that not all factors of product performance are the same or equal in the eyes of each customer and some factors create more satisfaction than others. These factors or attributes are classified into five categories; attractive quality, one dimensional quality, must-be quality, indifferent quality and the reverse quality (Nobuhiku, 1984).

The attractive quality is the attribute that provides satisfaction when achieved in full but it does not cause dissatisfaction when unfulfilled (Bartikowski and Llosa, 2003). They are not expected by the customer for example when Kenya Power, in the recent past, gave out energy saving bulbs for free to its customers. Such attributes are often unspoken. The one dimension quality results in satisfaction when fulfilled and dissatisfied when not fulfilled. Such attributes are spoken of for example a company advertising that it will sell two products for the price of one. Customers will thus be dissatisfied if they do not get this value on the shelves. The must-be quality is often over-looked often when it is fulfilled but if it is not present, the customer is disappointed. The customer views it as a basic quality. For example selling bread that is stale. The indifferent aspect is neither good nor bad and leads to neither satisfaction nor dissatisfaction. The reverse quality shows that not all customers are alike. For example some customers would like a 3D TV set while others do not see the benefit of complex technology and prefer a basic TV.

2.7.3 American Customer Satisfaction Index (ACSI)

The American Customer Satisfaction Index (ACSI) offers a reliable set of metrics and benchmarking standards to measure utility customer satisfaction. It is produced by the American Customer Satisfaction Index, a private company based in Ann Arbor, Michigan. It attempts to quantify the financial output from improving customer satisfaction. However, some factors affecting customer satisfaction may be beyond the company's control e.g. fluctuating fuel prices and government levies. The ACSI uses customer reviews as the input to a multi-equation model developed at the University Of Michigan School Of Business. It combines customer satisfaction

within a series of cause-and-effect relationships. The drivers of customer satisfaction are on the left side while the outcomes of customer satisfaction are on the right as illustrated in Figure 4.

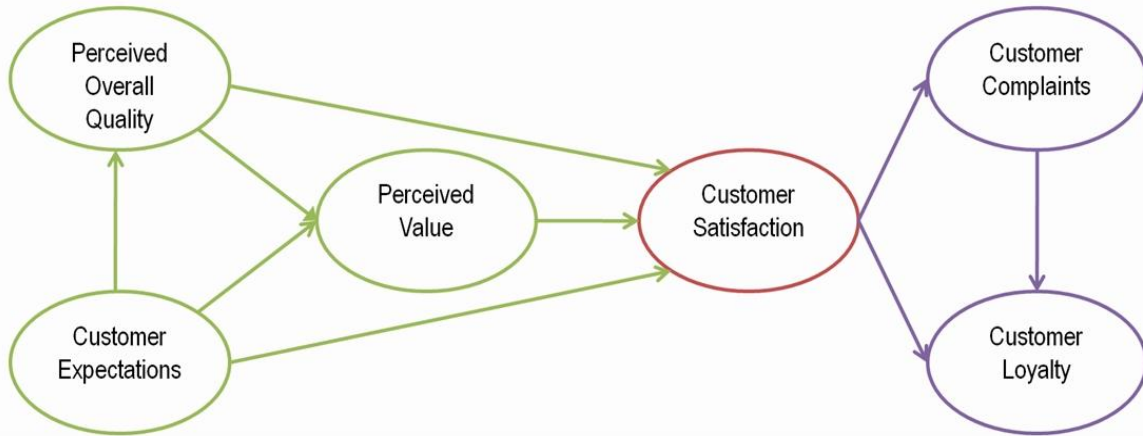


Figure 4: American Customer Satisfaction Index (ACSI), (American Customer Satisfaction Index, Ann Arbor, Michigan)

The drivers include customer expectations, perceived value and perceived quality. The outcomes include customer complaints, customer loyalty, customer retention and price tolerance (Wong, 2013). The drivers and outcomes are measured using several questions that are weighted within the model. They are rated on a scale of 0 to 100. The arrows represent impact with the indices on the left causing an impact to those on the right. Hence one can determine which drivers, if improved, will affect customer satisfaction.

Customer expectations are a measure of the customer's anticipation of the product (Xueming and Bhattacharya, 2006). They represent both the before and after experience. Perceived quality is a measure of the customer's evaluation of the product after recent purchase. It is measured by the degree to which the product meets the customer's needs and reliability. Perceived value is a measure of quality of the product relative to price paid. This is often referred to as value for money. Customer complaints are determined by the percentage of customers who report to the company their dissatisfaction with the product. Customer loyalty refers to the customer's likelihood to purchase the product again from the same company (Fornell and Claes, 2006).

2.8 Conceptual Framework

In this study, customer satisfaction is the dependent variable while communication techniques, reliability of power supply, cost of electricity and innovation of new products are the independent variables. This is illustrated below.

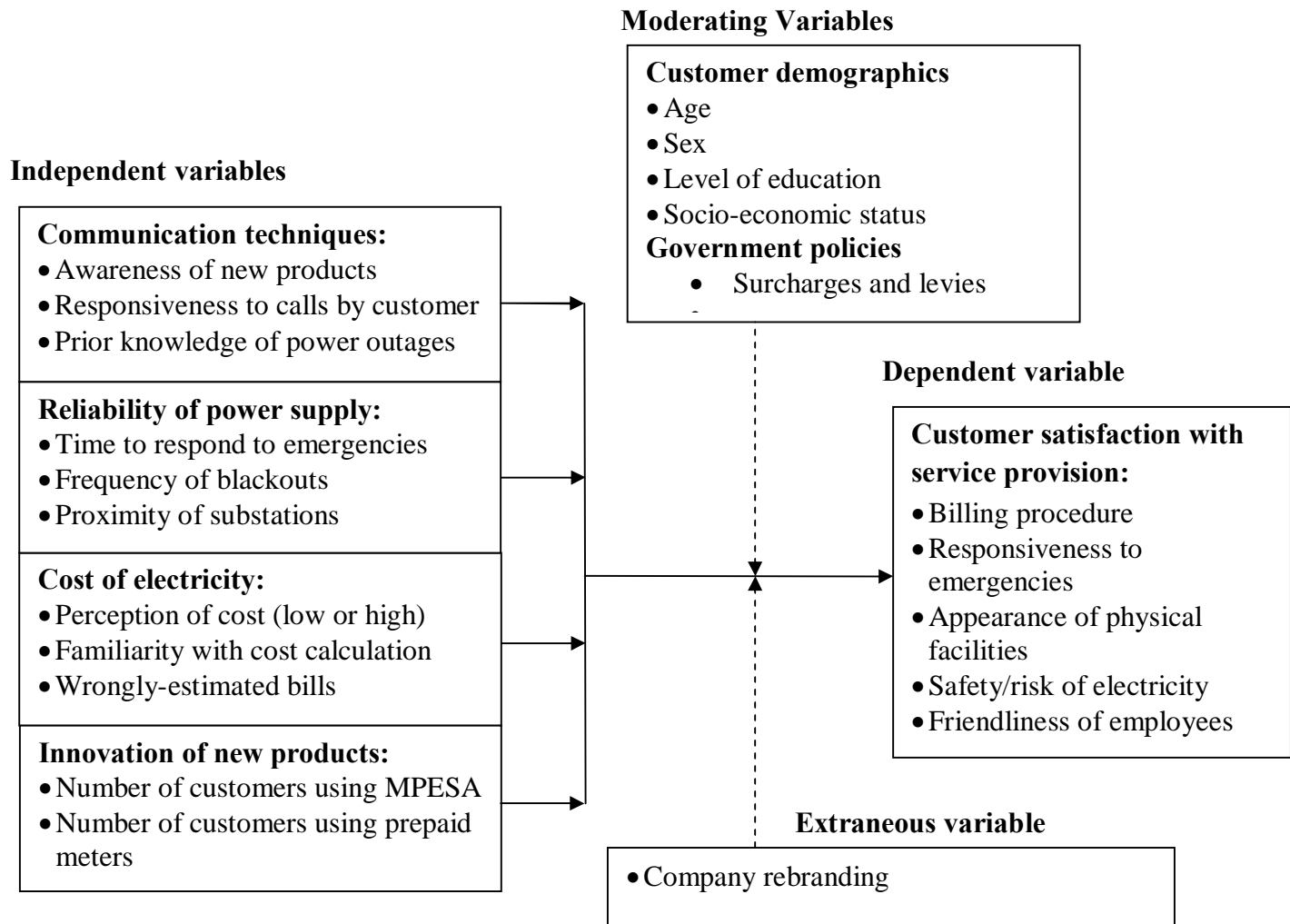


Figure 5: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter includes the research design, target population, sampling procedure, methods of data collection used, validity and reliability of the research. It also contains the methods of data analysis, definition of variables and ethical issues.

3.2 Research Design

This research used a descriptive survey design of data collection. The descriptive survey highlights an accurate depiction of the respondents' behaviours, opinions, beliefs and abilities (Cooper and Schindler, 2008). This type of survey alleviates bias during data collection. A descriptive survey does not answer the how/when/why question but answers the questions of what/why/how of the phenomenon under study (Churchill, 1991). Hence smaller but focused samples are often used. According to Mugenda and Mugenda (2004), the purpose of descriptive research is to determine and report the way things are and it helps in establishing the current status of the population under study. This type of survey is used in preliminary studies to enable researchers gather information interpret data for clarification. The most common method of qualitative data collection is interviews but other forms such as group discussions, observation and reflection of field notes are often used. This design was chosen because it ensures reliability of data.

3.3 Target Population

The target population for this study consisted of Kenya Power Company's internal and external customers in Nairobi County. The internal customers are Kenya Power Company employees in Nairobi West, North and South divisions. The external customers are Kenya Power Company customers in the above-mentioned regions. Nairobi County was chosen because it is an urban area so most residents use electricity. Nairobi County is resident to people of different social and economic backgrounds hence the sample will be heterogeneous. The residents of urban areas are often more educated hence know what to expect from the company. Some have

even travelled to developed countries and can compare the situation in first world countries versus Kenya. The staff in Kenya Power Company was chosen because they routinely receive and address customer complaints and hence have invaluable statistics. The total number of internal and external customers in Nairobi County is 1.35 Million (Kenya Power Human Resource and Customer Care Departments, 2014). The subgroups identified were Nairobi West with 416,509 customers, Nairobi South with 547,195 customers and Nairobi North with 386,868 customers.

3.4 Sampling Procedure and Sampling Size

A sample is a subgroup of the population that the researcher is interested in (Mugenda and Mugenda, 2003). A large random sample almost always gives an estimate that is close to the parameter (Moore & McCabe, 2003). The target population for this study consists of 1.35 Million customers. Therefore what fundamentally matters is the sample size and not the population size as long as the population size is at least 100 times the size of the sample. The sample was selected using random stratified proportional sampling method. Proportional sampling means that every individual in the target population has an equal chance of being selected (Dalen, 1979). An advantage of this sample procedure is that it is free of classification error and it requires very little advance knowledge of the target population. Popham and Sirotnik (1973) contend that in order to draw legitimate inferences about populations from samples that the sample has to be representative of the population and randomly selected. The following formula was used to calculate the number of respondents needed (Krejcie and Morgan, 2008).

$$S = \frac{X^2 - N P (1-P)}{d^2 (N-1) + X^2 P (1-P)}$$

Where

S = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.50)

Krejcie and Morgan table however came up with a table (See Appendix VII) that can be used to determine the sample size therefore no calculation is necessary. Using this table, a sample size of 384 respondents was reached. For a sample of 100,000 and above, the sample size is always 384. The sample size of 384 respondents was then divided among the three regions. This is called proportional allocation as illustrated below:

- % Nairobi West = $416,509 \div 1.35 \text{ Million} = 31\%$ (119 respondents)
- % Nairobi North = $386,868 \div 1.35 \text{ Million} = 29\%$ (111 respondents)
- % Nairobi South = $547,195 \div 1.35 \text{ Million} = 40\%$ (154 respondents)

3.5 Research Instruments

This study used primary data collection methods. Questionnaires were used to collect information from the selected sample units. Questionnaires were used since the research contains variables that cannot be directly observed such as opinions, attitudes and feelings (Touliatos and Compton, 1998). The data collection instrument used comprises of structured multiple choice questions and descriptive statements as illustrated in the Likert chart discussed in chapter one. The statements are to be rated from a scale of zero to five with zero being a feeling of least agreement or satisfaction and five being strong agreement or satisfaction (Armstrong, 1987). A few questions are open-ended to draw out the respondents' feelings, attitudes and opinions. The preliminary section of the questionnaire collects demographic information such as age, gender, education level and residential area. The second section determines the knowledge of respondents on the services provided by Kenya Power and reviews the relationship between communication techniques, reliability of power supply, cost of electricity and innovation of new products on customer satisfaction. The questionnaire was self-administered. The advantages of using questionnaires as a method of data collection is that it is cheap, uses little amount of time, has limited effect on validity and reliability and the results can be easily interpreted (Burns and Bush, 2010). The disadvantages of questionnaires are that it only extracts a limited amount of information as determined by the researcher, there is no way to tell how truthful the respondent is the respondent may interpret the questions differently and there is a possibility of researcher imposition meaning the researcher might miss some important information thinking it is not important.

3.5.1 Pilot Testing

A pilot test was conducted whereby 20 questionnaires were given to random customers. This was done to find out if the questionnaires were valid and reliable. Some grammar corrections were made. Some ambiguous questions were also made clear.

3.5.2 Validity of the instruments

Validity implies how well the measuring instruments used in the research fulfill the purpose of the study. The purpose of this study was to establish the influence of communication techniques, reliability of power supply, cost of electricity and innovation of new products on customer satisfaction. Creswell (2007) suggests one to use of different methods to evaluate validity. He advises the researcher to use at least two strategies. The two strategies adopted in this study are peer review debriefing and the rich and thick description. The former strategy involves having a well-versed supervisor to monitor the research and help analyze the results. The latter strategy involves collecting personal information about participants to determine the validity of their responses. Construct validity was also ensured by engaging a panel of experts - project supervisor and department lecturers who were familiar with the topic.

3.5.3 Reliability of the instruments

A central issue in qualitative research is trustworthiness, also referred to as credibility or dependability. Reliability is a measure of how well the study actually measures what it is supposed to measure (Trochim, 2013). The same results should be obtained if the study is done over and over again. Due to time constraints, the research cannot be administered to the same sample more than once. Therefore it is difficult to draw any conclusions on the test-retest reliability of this study. However, split half reliability was achieved by splitting the questionnaire into two parts and administering the whole questionnaire to the same group of respondents. The results of both parts should yield similar results to confirm reliability. Alpha Cronbach's formula for coefficient alpha (is the commonly used reliability coefficient) provides internal consistency reliability estimates of raw scores. This formula was used to calculate the coefficient which was 0.73. According to Mugenda and Mugenda (2008), a coefficient of 0.7 and above is sufficient.

3.6 Data Collection Procedures

The questionnaire was created using suitable questions modified from related research and individual questions formed by the researcher. Permission to collect data was sought from the University of Nairobi and from the National Commission for Science, Technology and Innovation. The survey comprised of ten questions which are related to the respondents' perception regarding customer satisfaction with Kenya Power. Likert scale is used to satisfaction or dissatisfaction with a statement. The questionnaires were distributed to the chosen respondents by the researcher using the drop and pick method. The respondents were assured of confidentiality; they were not required to fill in their names on the questionnaire. The researcher also understood that honesty and accuracy in answering the questionnaire is of utmost importance therefore the respondents were urged to be as honest as possible because no one would victimize them since their identities were withheld. The filled in surveys were collected after approximately 3 days. There were no incentives offered for participating in the research.

3.7 Data Analysis Techniques

Data analysis involved different stages. First, the filled and submitted questionnaires were checked for completeness, errors and omissions (Mugenda and Mugenda, 1999). They were then tabulated and coded. The findings were presented using percentages, mean, standard deviation and frequency tables. The analysis was done using the Statistical Package for Social Sciences (SPSS) Version 16. This enabled the researcher to group the large quantity of data and analyze it easily. The results from the open-ended questions were listed and reported in a descriptive and narrative manner. Burck (2005) notes that this technique is appropriate for analyzing patterns and major themes. After the data was broken down, valuable insights were gained by putting the data back together in the re-order form. Content analysis was used to analyze the information accrued. The objectives of the study were then described (Mugenda and Mugenda, 2003). Content analysis is used to make references to trends and patterns.

3.8 Ethical Issues

This research required the participation of customers therefore ethical issues were addressed. This was needed to make sure that their privacy and safety was addressed. Consent

and confidentiality was a major requirement of the study. To obtain consent, the respondents were told about the purpose of the study. The respondents were made to understand that the survey was conducted for study purposes. Anonymity was ensured as some customers, especially internal, feared victimization. The names and personal information of the participants were not disclosed to ensure confidentiality. Only the information relevant to the research was disclosed. The participants were also free to drop out of the research during the process therefore no one was forced to take part. The researcher promised to relay the findings of the research to the respondents.

3.9 Operationalization Definition of Variables

Table 3.1: Operationalization table of variables

Objective	Variable	Indicators	Measurement Scale	Tools of analysis
To establish level of customer satisfaction	Customer satisfaction	<ul style="list-style-type: none"> • Billing procedure • Responsiveness to emergencies • Appearance of physical facilities • Safety/risk of electricity • Friendliness of employees 	Percentage	questionnaire
To establish the influence of communication on customer satisfaction	Communication techniques	<ul style="list-style-type: none"> • Awareness of new products • Responsiveness to calls by customer • Prior knowledge of power outages 	Likert score	questionnaire
To assess the influence of reliability on customer satisfaction	Reliability of power supply	<ul style="list-style-type: none"> • Time to respond to emergencies • Frequency of blackouts • Proximity of substations 	Likert score	questionnaire
To determine the influence of cost on customer satisfaction	Cost of electricity	<ul style="list-style-type: none"> • Perception of cost (low or high) • Familiarity with cost calculation • Wrongly-estimated bills 	Likert score	questionnaire
To identify the effect of innovation on customer satisfaction	Innovation of new products	<ul style="list-style-type: none"> • Number of customers using MPESA • Number of customers using prepaid meters 	Likert score	questionnaire

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, presentation and interpretation. It also contains data on the respondents' demographic characteristics. The study was carried out in three regions in Nairobi County; Nairobi West, Nairobi South and Nairobi North. A sample size of 96 respondents was selected from the above regions.

4.2 Questionnaire Response Rate

The response was then analyzed as shown in Table 4.1

Table 4.1: Questionnaire Response Rate

Response rate	Frequency	Percentage (%)
Response	211	55
Spoilt/Not returned	173	45
Total	384	100

Out of the 384 questionnaires that were administered, 211 of them were correctly filled and returned. This resulted in a response rate of 55%. A response rate of 50% and above is adequate for social studies (Idrus and Newman, 2002). The high response rate demonstrates a willingness of the respondents to participate in the study. The other 173 questionnaires were either incorrectly filled or not returned to the researcher and therefore were disqualified. Some questionnaires were not returned due to the fact that some of the respondents took the questionnaires home and unfortunately even after persistent follow-up, there was no positive response from them. The findings were presented using frequency tables for ease during analysis and interpretation. Statistical analysis of the findings was done using the Statistical Package for Social Sciences (SPSS) Version 16.

4.3 Demographic Information of the Respondents

Prior to tackling the issues at stake in this study, the researcher sought to establish the gender, age and level of education of the respondents.

4.3.1 Distribution of Respondents by Gender

The researcher sought to establish the gender of the respondents. The results are displayed in Table 4.2.

Table 4.2: Distribution of Respondents by Gender

Gender	Male	Female	Total
Nairobi north	53	17	70
Nairobi South	43	28	71
Nairobi west	39	31	70
Total	135	76	211

From Table 4.2, it is evident that the highest number of respondents 135 (64%) were male compared to female respondents 76 (36%). This implied that the male counterparts were more willing to take part in the survey. From the data below the near equal response in relation to gender was achieved in Nairobi west based on the fact that the region posed a higher number of female residents as compared to the other two regions.

4.3.2 Distribution of Respondents by Age

The researcher then sought to determine what age bracket the respondents fall in. The results are illustrated in Table 4.3.

Table 4.3: Distribution of Respondents by Age

Age Bracket	Frequency	Percentage %
21-30	127	60
31-40	38	18
41-50	32	15
50 & above	14	7
Total	211	100

From the results in Table 4.3, it was deduced that 127 (60%) of respondents were aged between 21-30 years followed by 38 (18%) who were aged between 31-40 years and 32 (15%) who were aged between 41-50 years. The least were 14 (7%) at age 50 and above. This revealed that the majority of the respondents were mature people hence reliable to get information from.

4.2.3 Level of Education of Respondents

The researcher then sought to determine the level of education of the respondents as illustrated in Table 4.4.

Table 4.4: Level of Education of respondents

Education level	Frequency	Percentage %
Primary	8	4
Secondary	15	7
University & College	154	73
Post-graduate	34	16
Total	211	100

It was discovered that the highest numbers of respondents 154 (73%) had attained university or college education. This was followed by 34 (16%) of the respondents who had post-graduate education and 15 (7%) who had attained secondary education. The least were 8 (4%) who had attained primary education. This indicated that a high number of respondents had above average education that goes beyond the basic secondary education.

4.4 The Relationship between Communication Techniques and Customer Satisfaction

The study sought to determine the relationship between customer satisfaction and communication techniques used by Kenya Power Company. The respondents were given a list of variables on the following factors and asked to rate them using a five point measurement scale. The results are tabulated in table 4.5.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Table 4.5: The Relationship between Communication techniques and Customer Satisfaction

Influence of communication techniques on customer satisfaction	1	2	3	4	5	Mean	SDV
Communication enhances customer satisfaction	0	0	2	11	198	5.6	0.84
Kenya Power needs to improve its communication methods	0	1	1	13	196	5.2	1.0
I am always aware of the latest products by Kenya Power	1	1	1	196	12	4.2	0.79
The Kenya Power TV and newspaper advertisements are informative	1	1	2	196	11	4.2	1.0
My calls to the customer care number/(s) are always answered	0	0	210	1	0	3.2	0
Kenya Power staff respond immediately to customer complaints	11	194	4	2	0	2.0	1.0
The Kenya Power website has all the information I need	8	192	10	1	0	2.1	1.1
I use Facebook/Twitter to forward my complaints to Kenya Power	1	193	0	9	8	2.1	1.1
The complaints made on the Kenya Power Facebook page /Twitter handle are always addressed	17	190	0	0	1	2.1	1.2

From the descriptive analysis from the Table 4.5, it is evident that most of the customers strongly agree that communication enhances customer satisfaction. However, the majority of the respondents were of the opinion that Kenya Power needs to improve its communication techniques as most of them were not always aware of the latest products in Kenya Power Company. The respondents generally agreed that the company's TV and newspaper advertisements were informative and catchy. The majority of respondents complained that although the Kenya Power Company staff generally responded to their calls to customer care, the staff rarely responded to complaints in time. Most of the respondents were not aware that the company website contains most of the information that the customer needs. Very few respondents used Facebook and twitter to address their complaints. Of those who use, that is the ones aged between 21-30 years of age, most noted that their complaints are rarely addressed.

4.5 The relationship between Reliability of Power supply and Customer Satisfaction

The study then sought to determine the relationship between customer satisfaction and reliability of power supply. The respondents were given a list of variables on the following factors and asked to rate them using a five point measurement scale. The results are tabulated in Table 4.6. Majority of the respondents agreed that reliability of power supply enhances customer satisfaction. However, most of them complained of at least one power blackout every month despite the fact that there is a power substation near their area of residence. They therefore felt that it is necessary to own a back-up generate because of the constant blackouts. On average, the customers felt that power blackouts occur whenever it rains. Most of them had experienced power rationing. A large number of the respondents noted that Kenya Power Company always communicates power interruptions in advance and calls to customer care reporting power interruption are always responded to. However, majority of the respondents felt that power is restored after a long time. Some respondents reported that their electrical equipment had been damaged due to a power surge.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Table 4.6: The relationship between Reliability of Power supply and Customer Satisfaction

Influence of reliability of power supply on customer satisfaction	1	2	3	4	5	Mean	SDV
Reliability of electricity supply enhances customer satisfaction	0	0	1	9	201	5.8	1.22
I experience at least one power blackout every month	0	0	1	10	200	5.1	0.74
There is a Kenya Power substation near my area of residence	0	1	2	9	199	5.0	1.0
I have experienced power rationing	0	0	2	203	6	4.2	1.22
Power interruptions are always communicated in advance by Kenya Power	0	0	9	200	2	4.1	1.1
Calls to customer care reporting power interruption are always answered	0	0	198	11	2	3.2	1.1
There is a power blackout every time it rains	0	199	11	1	0	2.2	1.0
Power is restored very fast after a power blackout	11	195	5	0	0	2.1	1.1
My electrical equipment has been damaged due to a power surge	10	196	4	1	0	2.1	1.0
It is necessary to have a back-up generator because of constant blackouts	8	197	6	1	0	2.1	1.1

4.6 The Relationship between Cost of electricity and Customer Satisfaction

The study sought to determine the relationship between customer satisfaction the cost of electricity. The respondents were given a list of variables on the following factors and asked to rate them using a five point measurement scale. The results are tabulated in table 4.3. Most respondents agreed that the cost of electricity affects customer satisfaction. Although most respondents were aware that Kenya Power distributes electricity, a few thought that Kenya Power generates electricity which is untrue. Majority of the respondents were aware that change in fuel prices affects the cost of electricity. Most of them felt their electricity bills were accurate though a few were of the opinion that the bills were too high. A few had been refunded for over-payment of electricity bills. Some respondents felt that Kenya Power is responsible for the cost of electricity bills. Few of them knew how their electricity bills are calculated.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Table 4.7: The Relationship between Cost of electricity and Customer Satisfaction

Effect of cost of electricity on customer satisfaction	1	2	3	4	5	Mean	SDV
Cost of electricity affects customer satisfaction	21	6	0	1	183	5.7	1.22
Kenya power distributes electricity	0	0	1	23	187	5.7	1.22
Change in fuel prices causes a change in the cost of electricity	8	0	2	9	192	5.7	1.22
My electricity bills are accurate	8	0	3	199	1	4.2	1.1
Cost of electricity is beyond Kenya Power's control	0	0	201	1	9	3.1	1.1
My electricity bill is always too high	0	200	0	1	10	2.2	1.1
I know how my electricity bill is calculated	192	8	10	0	1	1.8	1.2
I have been refunded for over-payment of electricity bills	198	11	0	2	0	1.2	1.0
Kenya power generates electricity	197	3	2	0	9	1.2	1.0

4.7 The Relationship between Innovation of new products and Customer Satisfaction

The study sought to determine the relationship between customer satisfaction and innovation of new products. The respondents were given a list of variables on the following factors and asked to rate them using a five point measurement scale. The results are tabulated in Table 4.8. The respondents strongly agreed that new product innovations enhance customer satisfaction. Majority of the respondents paid their electricity bill via MPESA as they felt that it is better than queuing in the banking hall. Most of those who use prepaid meters felt that prepaid meters were better than post paid meters and are highly likely to recommend them to other users. Most of the respondents check their electricity bills via SMS. Majority of the respondents were somewhat satisfied with Kenya Power Company's services although far less would remain with Kenya Power in case a competitor joins the market.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Table 4.8: The Relationship between Innovation of new products and Customer Satisfaction

Influence of innovation of new products on customer satisfaction	1	2	3	4	5	Mean	SDV
Paying bills via MPESA is better than queuing in the banking hall	0	0	0	10	201	5.8	1.2
New product innovations enhance customer satisfaction	0	0	1	11	199	5.5	1.1
I pay my electricity bills via MPESA	0	1	2	11	197	5.5	1.1
For those who have used both prepaid and post paid meters, are prepaid meters better than postpaid meters	0	0	3	9	199	5.2	1.0
For those who use prepaid meters, are you likely to recommend prepaid meters to a friend	0	0	1	16	194	5.2	1.0
I check my electricity bills via SMS	0	11	0	2	198	5.2	1.0
I am satisfied the services provided by Kenya Power	2	8	201	1	0	3.2	1.1
I would remain a Kenya Power customer if a competitor comes into the field	11	11	189	0	0	3.1	0.65

4.8 Additional Feedback from the Respondents

Some respondents claimed that in cases of faulty meters, the Kenya Power staff takes long to handle the issues. Also in incidents of power disconnection, they felt that the staff are inhumane and do not reason with the customers. The customers also raised the concern in the connection fee and metering costs being too high. This has made it hard for them to access the connection of electricity. Also they raised the issue that power interruptions should also be advertised on TV not only in the paper as it is. The respondents also felt that there is always a delay in the system in relation to acquisition of pre-paid tokens once they have been purchased via MPESA. Some were apprehensive to take part in the survey because they felt that such surveys had been carried out before but there was no positive outcome.

The respondents felt that the company was not in touch with reality and were hoping for a competitor to come in place and take them out of business as was in the case of Telkom Kenya and Safaricom. The respondents felt that Kenya Power Company is complacent despite bad

customer reviews only because they did not have a competitor. In addition, the researcher found out that some respondents were not aware of the company's role in the energy sector. Some of them thought that Kenya Power Company generates electricity in addition to transmission of electricity. This solely puts the weight of their disappointments on the company yet there are other companies like KenGen and Geothermal Development that play the big role of generating electricity; if there is not enough supply of electricity, Kenya Power has no electricity to transmit to the customers. However Kenya Power Company more often shoulders the blame during power rationing.

4.9 Interview Schedule for Kenya Power employees

The respondents outlined Email, Twitter, Facebook, Telephone calls, meetings, internal memos, Bulletin boards and SMS as the communication techniques used in Kenya Power Company with the most effective being Twitter, TV, Email and telephone calls. They noted that the high costs of electricity connection and metering resulted in customers being hostile to meter readers, customers seeking other sources of power supply such as solar, increased illegal electricity connections especially in the slums and increase in delay on bill payment. Majority of the staff believed that Kenya Power Company's services are reliable however about half of them believe that the customers are satisfied with the services while the other half disagrees mainly due to numerous complaints of power interruption and high electricity bills.

The innovations that the respondents outlined are prepaid meters, payment of bills via MPESA, use of social media for communication, use of concrete poles versus wooden poles and rural electrification. The staff also outlined some corporate social responsibility (CSR) activities such as Boresha Stima Viwandani, Panda Miti Milioni, Kenya Power Charity Cup and One Young World Summit. Boresha Stima Viwandani aims to offer free maintenance of electrical equipment in small industries while Panda Miti Milioni aims to plant as many trees as possible all over Kenya to curb deforestation. Kenya Power charity cup sponsors football matches for the youth while One Young World Summit mentors the youth through sponsors to attend international youth summits.

The steps taken by the staff to respond to ensure customers are satisfied were outlined; direct feedback via call centres, customer clinic programs to ensure they get the right information, reduced response rate in case of blackouts via automatic reconnection to alternative power lines,

and the introduction of a new toll free emergency number that gets them immediate assistance. The researcher also found out that Kenya Power Company contracts a lot of its work such as construction of power lines, acquisition of way leaves, installation of prepaid meters and design of customer schemes. Contractors were sometimes paid before completion of jobs and hence abandon the job once payment kicks in. The company is therefore forced to complete the cost and this double cost has to be recovered from customers, raising the cost of connection and electricity consumption. The researcher also discovered that the supervisory staffs were not enough to supervise contracted works. However, the company had recently undertaken mass hiring especially of electrical engineers who were to be deployed in the newly created counties to supervise contracted works.

In addition, the study found out that Kenya Power Company's employees were not satisfied with the workplace. This was partly due to unfair remuneration of staff that do the same jobs, biased allocation of training facilities, nepotism/tribalism during promotions and lack of hygiene in the workplace. This greatly affected the output of the internal customers which eventually affected the external customer negatively. That could explain why emergency teams did not attend to emergencies in time. Lack of hygiene in the workplace also demotivated workers and hence the output was little or lacked quality. Unfair promotions also put in place staff that were not competent and the resulting output was wanting.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of the findings on the relationship between customer satisfaction with Kenya Power Company and communication techniques, cost of electricity, reliability of electricity supply and innovation of new products in Nairobi County. The section is sub-divided into summary of the findings, discussions, conclusions and recommendations.

5.2 Summary of the Findings

This section was guided by the variables under study as follows:

5.2.1 Communication Techniques and Customer Satisfaction

The respondents almost unanimously agreed that communication enhances customer satisfaction. However, they noted that Kenya Power Company needs to improve its communication techniques for example using TV more often as a mode of communication. All respondents noted that their calls to customer care are always answered although the staff do not respond immediately to emergencies and complaints. The research found that many of the respondents were not satisfied with the company's services and products. Most customers complained of poor customer service. Their concern was that the company does not take their complaints seriously

5.2.2 Reliability of Power Supply and Customer Satisfaction

The respondents felt that power supply was unreliable. They complained of constant blackouts; at least once a month. They also noted that the Kenya Power Company emergency teams do not respond in time and at times they are told that the response teams are on the way and they arrive even a day later. This was mostly common over the weekend. Some reported that they have resulted to solar energy because it is more reliable than electricity.

5.2.3 Cost of Electricity and Customer Satisfaction

The researcher found out that most of the respondents believed their electricity bills were too high and so was the cost of new connections. The researcher also discovered that most customers did not know how electricity was calculated and that the Energy Regulatory Commission had a huge role in this calculation as they impose standard tariffs that are included in the bills. Some respondents were not aware that fluctuations in fuel prices greatly alter the cost of electricity because the same fuel is used to run the machines used by the generating companies.

5.2.4 Innovation of new products and Customer Satisfaction

The researcher found out that majority of the respondents who used prepaid meters preferred them to post paid meters. However a few felt that the cost of electricity was higher with prepaid meters. The researcher also determined that many of the respondents check their electricity bills via SMS and pay their bills via MPESA. On a different note, it was realized that many customers do not know of new products such as Boresha Stima Viwandani and One Young World Summit.

5.3 Discussions of the Study

This discussion was guided by the variables under study as follows:

5.3.1 Communication Techniques and Customer Satisfaction

From the study, it was concluded that customers were not satisfied with the communication techniques used by Kenya Power Company. For example, they were not aware when power blackouts were due despite the fact that they were advertised in the Daily newspapers. Customers suggested that the company used social media instead to place these adverts. Customers also complained of lack of Personal Relations in the staff especially the power disconnection staffs who were accused of being rude and inhumane. This concurs with the research submitted to Dedan Kimathi University of Technology (Loice Kimondo Wakuru, 2012) where customers were dissatisfied with the communication methods used by the Kenya Power Company. The Kenya Power Company staff rated Twitter as one of the most effective form of communication. This concurs with Kochoa (1992) assertion that information technology has a large impact on organizations by changing for the better the way procedures are done.

5.3.2 Reliability of Power Supply and Customer Satisfaction

From the research, it was found that Kenya Power Company was rated very poorly when it comes to reliability of power supply. Customers complained of constant power outages; at least once a month. They went on to say that the emergency teams do not respond in time to emergencies. Some reported that their electrical equipment had been damaged due to power surges. These findings do not concur with the research submitted to Dedan Kimathi University of Technology (Loice Kimondo Wakuru, 2012) that found that customers are satisfied with Kenya Power Company's services. The customers in Nyeri County rated reliability of electricity supply very highly. In line with the MD&CEO's statement (Daily Nation, 11th June 2014), the Kenya Power Company staff reported that the company had embarked on steps to provide large power industries with alternative power supply.

5.3.3 Cost of Electricity and Customer Satisfaction

From the findings, one of the reasons customers are not satisfied with Kenya Power Company is due to the high cost of electricity. In addition, high cost of new connection even deterred potential customers from applying for meters. This differs with the previous research conducted (Diamond, Booz.allen & Hamilton, 1998) where the conclusion made was that customers are more concerned with reliability than price. This is untrue as customers were very adamant that high cost of electricity played a great role in their dissatisfaction with Kenya Power Company. However, majority of the company's staff said that the cost of electricity is beyond the company's control to a major extent. This is in agreement with Reuter's report (November 23, 2009) that states that some factors that affect cost of electricity are beyond the company's control.

5.3.4 Innovation of new products and Customer Satisfaction

From the findings, customers outlined prepaid meters, payment of bills via MPESA and checking bills via SMS as some of Kenya Power Company's innovations. The users of the aforementioned products rated them highly. They preferred payment of bills via MPESA because it avoided wastage of time when lining up in banking halls. They also preferred checking their bills via SMS as the response was instant and they could store the bills in their phones and keep track of their usage. These innovations enhanced their satisfaction with the company. This concurs

with Rogerø (1995) assertion that innovation increases the bundle of knowledge and skills an organization possesses and in turn improves customer satisfaction.

5.4 Conclusions

In conclusion, the study found out that communication techniques, reliability of electricity supply, cost of electricity and innovation of new products greatly affects customer satisfaction. If this research has any future use, it may be used by Kenya Power Company to bridge the gap between the company and its internal and external customers. This can be done by improving the working environment for its employees who will in turn positively affect the external customers. Communicate techniques need to be re-evaluated so that they can be more effective. Reliability of electricity supply needs to be enhanced as well. The cost of electricity keeps rising and this can be controlled externally to an extent. New innovations also need to be more common to keep up with advances in technology.

5.5 Recommendations

1. Based on the research finding, the researcher recommends that the management in Kenya Power Company re-evaluates its communication techniques as customers are not aware of the company's activities. For instance, some customers are not aware that one can apply for a pre-paid meter free of charge. Customers are also not aware of the MPESA paybill numbers which could greatly relieve the customer of the task of lining up in the banking halls to pay electricity or purchase prepaid tokens. Customers are also not aware that they can check their bills via SMS. The researcher recommends that the company uses Twitter and Facebook to advertise new products and create awareness in the youth as majority of the population is between the ages of 21 and 30 years as evident in the research. The researcher also noted that the company uses bulletin boards to date which is a waste of paper yet the same messages are in addition communicated via the company mail.
2. The researcher suggests that Kenya Power Company enhance reliability of electricity supply by reducing the response time of attending to power outages. Currently, the emergency teams take hours to arrive on site, if they arrive at all. This can be resolved by creating a system whereby customers are switched automatically to another power line when the one serving them fails. Another option is to have teams situated in different areas so that they can

respond to emergencies in their vicinity, reducing the response time. The researcher also suggests that the company redesign the systems especially in urban areas to be able to sustain the ever-growing demands of the new customers. This involves re-conductoring high voltage lines to a higher current-carrying capacity and converting most overhead lines to underground cables; this reduces failure of the lines and also reduces power losses.

3. The researcher also recommends that the management looks into ways of reducing the cost of new connections and the cost of consumption of electricity. Currently, the customers pay hundreds of thousands for new connection. This deters some customers from applying for connection which in turn reduces Kenya Power Company's revenue. Aside from reducing cost of connection, the management should look into allowing customers to pay for connections in installments as they pay their electricity bills. This will lessen the burden of paying the connection fee in one lump sum. Another suggestion is for the company to reduce to the cost of electricity consumption by reducing the losses incurred internally in the system due to double-design of works; this occurs when different departments in the organization do not work in sync duplicating work and hence incurring losses which have to be recovered from the customer. The company should also try as much as possible to do the work internally versus contracting as some contracting jobs have to be redone at the company's and customer's cost.
4. Based on the findings, the researcher recommends that Kenya Power Company should come up with new products to meet the technological advances of other power transmission companies. This involves adoption of new devices for switching of electric power, new devices for electrical energy conversion, improved design tools to be used for current interrupting devices, instrumentation and methods that can be used to improve power quality, controllable power devices for submerged marine substations, new sensing devices for monitoring of power system components, new techniques for on-line and off-line diagnostics of power components and new methods for detection and handling of critical events in power systems such as short-circuits and transient over-voltages.

5.6 Suggestions for Further Studies

Based on the findings the researcher recommends further studies on the following areas;

1. The effect of reliable electricity supply on national development in Kenya
2. The factors influencing the cost of electricity in Kenya Power Company
3. The challenges facing power generation companies in Kenya

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APPENDICES

Appendix I: Letter of Transmittal of Data Collection

SHEILLA AKARANGA
P.O. BOX 5297-00100
NAIROBI.

Dear Sir/Madam,

RE: A SURVEY OF CUSTOMER SATISFACTION WITH KENYA POWER

I am a Master of Arts student at the University of Nairobi undertaking a postgraduate degree in Project Planning and Management. The purpose of this questionnaire is to collect data on the effects of communication, reliability, cost and innovation on customer satisfaction in Kenya Power. You have been chosen as an interviewee in this research. My request is that you spare some time to fill in the questionnaire accurately and honestly. The information collected will be treated with utmost confidentiality while keeping your identity anonymous.

Thank you in advance.

Yours faithfully,

Sheilla Akaranga

Appendix II: Questionnaire

Introduction: Please complete the following questions to reflect your opinions as accurately as possible and to answer factual questions to the best of your knowledge. Your information will be kept strictly confidential.

PART 1: DEMOGRAPHIC INFORMATION

1. State your gender:

a) Male b) Female

2. Please indicate your Age (in years)? Between:

a) 21-30 b) 31-40 c) 41-50 d) Above 50

3. Please indicate your level of education

a) Primary b) Secondary College/ University d) Post graduate

4. State your job description and place of work.....

5. For Kenya Power employees, how long have you been working in Kenya Power?

Less than 1 year 1 ó 5 years 6 ó 10 years 11 ó 20 years over 20 years

6. Place of Residence.....

PART 2: COMMUNICATION TECHNIQUES AND ITS INFLUENCE ON CUSTOMER SATISFACTION WITH KENYA POWER

7. Please mark the appropriate box to show your level of agreement or disagreement

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Note: Communication is the transfer of information between Kenya Power and its customers

Influence of communication techniques on customer satisfaction	1	2	3	4	5
Communication enhances customer satisfaction					
Kenya Power needs to improve its communication methods					
I am always aware of the latest products by Kenya Power					
The Kenya Power TV and newspaper advertisements are informative and attention-grabbing					
My calls to the customer care number/(s) are always answered					
Kenya Power staff respond immediately to customer complaints and queries					
The Kenya Power website has all the information I need					
I use Facebook/Twitter to forward my complaints to Kenya Power					
The complaints made on the Kenya Power Facebook page /Twitter handle are always addressed					

PART 3: RELIABILITY OF POWER SUPPLY AND ITS INFLUENCE ON CUSTOMER SATISFACTION WITH KENYA POWER

8. Mark appropriately based on your level of agreement with the following statements.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Note: Reliability of power supply refers to constant power supply with few interruptions

Influence of reliability of power supply on customer satisfaction	1	2	3	4	5
Reliability of electricity supply enhances customer satisfaction					
I experience at least one power blackout every month					
Power is restored very fast after a power blackout					
There is a Kenya Power substation near my area of residence					
There is a power blackout every time it rains					
Calls to customer care reporting power interruption are always answered					
I have experienced power rationing					
My electrical equipment has been damaged due to a power surge					
It is necessary to have a back-up generator because of constant blackouts					
Power interruptions are always communicated in advance by Kenya Power					

PART 4: COST OF ELECTRICITY AND ITS INFLUENCE ON CUSTOMER SATISFACTION WITH KENYA POWER

9. The following statements show the influence of cost of electricity on customer satisfaction. Tick appropriately.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Note: Cost of electricity refers to the amount paid for everyday consumption of electricity

Effect of cost of electricity on customer satisfaction	1	2	3	4	5
Cost of electricity affects customer satisfaction					
My electricity bills are accurate					
I have been refunded for over-payment of electricity bills					
My electricity bill is always too high					
Cost of electricity is beyond Kenya Power's control					
Kenya power generates electricity					
Kenya power distributes electricity					
Change in fuel prices causes a change in the cost of electricity					
I know how my electricity bill is calculated					

PART 5: INNOVATION OF NEW PRODUCTS AND ITS INFLUENCE ON CUSTOMER SATISFACTION WITH KENYA POWER

10. The following statements show the influence of innovations on customer satisfaction. Tick appropriately.

Key: Strongly Disagree (1) Disagree (2) Not Sure (3) Agree (4) Strongly Agree (5).

Note: Innovations refer to new products in the market such as prepaid meters.

Influence of innovation of new products on customer satisfaction	1	2	3	4	5
New product innovations enhance customer satisfaction					
For those who have used both prepaid and post paid meters, are prepaid meters better than postpaid meters					
For those who use prepaid meters, are you likely to recommend prepaid meters to a friend					
Paying bills via MPESA is better than queuing in the banking hall					
I pay my electricity bills via MPESA					
I check my electricity bills via SMS					
I am satisfied the services provided by Kenya Power					
I would remain a Kenya Power customer if a competitor comes into the field					

Appendix III: Additional feedback

If you would like to provide additional feedback or suggestions on how to improve our services, please use the space below.

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Appendix IV: Interview schedule for Kenya Power employees

Job Title í
Division í

11. What are the communication techniques used in Kenya Power and which is the most effective?

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12. What is the effect of the high costs of electricity connection and metering on customer satisfaction?

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Appendix V: Kenya Power Tariffs

Tariff (December 2013 to June 2014)	Charges (KES)		
	Fixed charge	Energy charge (per kWh)	Demand charge (per kVA)
DC (Domestic, 240V)	120	First 50kWh:2.50 50 to 1 500kWh:11.62 Thereafter:19.57	n/a
SC (Small Commercial, 240V)	150	12.00	n/a
CI1 (Commercial, 415V)	2 000	8.70	800
CI2 (Commercial, 11kV)	4 500	7.50	520
CI3 (Commercial, 33kV)	5 500	7.00	270
CI4 (Commercial, 66kV)	6 500	6.80	220
CI5 (Commercial, 132kV)	17 000	6.60	220
IT (Domestic water heating)	120	13.00	n/a

Appendix VI: Surcharges

Surcharge	Rate / Notes
Fuel Cost Charge (FCC)	Variable rate per kWh, published monthly by KPLC in the Kenya Gazette
Foreign Exchange Rate Fluctuation Adjustment (FERFA)	Variable rate per kWh, published monthly by KPLC. This includes the sum of the foreign currency costs incurred by KenGen, the sum of the foreign currency costs incurred by [KPLC] other than those costs relating to Electric Power Producers.
Inflation Adjustment (IA)	Factors affecting include the Underlying Consumer Price Index as posted by Kenya National Bureau of Statistics and the Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 as published by the United States Department of Labour Statistics.
WARMA Levy	5 cents per kWh
ERC Levy	3 cents per kWh
REP Levy	5% of the base rate
VAT	16% on everything except the WARMA, ERC and REP levies and Inflation Adjustment

Appendix VII: Krejcie and Morgan Table

<i>Total</i>	<i>Sample</i>	<i>Total</i>	<i>Sample</i>	<i>Total</i>	<i>Sample</i>
10 ⇒	10	220 ⇒	140	1200 ⇒	291
15 ⇒	14	230 ⇒	144	1300 ⇒	297
20 ⇒	19	240 ⇒	148	1400 ⇒	302
25 ⇒	24	250 ⇒	152	1500 ⇒	306
30 ⇒	28	260 ⇒	155	1600 ⇒	310
35 ⇒	32	270 ⇒	159	1700 ⇒	313
40 ⇒	36	280 ⇒	162	1800 ⇒	317
45 ⇒	40	290 ⇒	165	1900 ⇒	320
50 ⇒	44	300 ⇒	169	2000 ⇒	322
55 ⇒	48	320 ⇒	175	2200 ⇒	327
60 ⇒	52	340 ⇒	181	2400 ⇒	331
65 ⇒	56	360 ⇒	186	2600 ⇒	335
70 ⇒	59	380 ⇒	191	2800 ⇒	338
75 ⇒	63	400 ⇒	196	3000 ⇒	341
80 ⇒	66	420 ⇒	201	3500 ⇒	346
85 ⇒	70	440 ⇒	205	4000 ⇒	351
90 ⇒	73	460 ⇒	210	4500 ⇒	354
95 ⇒	76	480 ⇒	214	5000 ⇒	357
100 ⇒	80	500 ⇒	217	6000 ⇒	361
110 ⇒	86	550 ⇒	226	7000 ⇒	364
120 ⇒	92	600 ⇒	234	8000 ⇒	367
130 ⇒	97	650 ⇒	242	9000 ⇒	368
140 ⇒	103	700 ⇒	248	10000 ⇒	370
150 ⇒	108	750 ⇒	254	15000 ⇒	375
160 ⇒	113	800 ⇒	260	20000 ⇒	377
170 ⇒	118	850 ⇒	265	30000 ⇒	379
180 ⇒	123	900 ⇒	269	40000 ⇒	380
190 ⇒	127	950 ⇒	274	50000 ⇒	381
200 ⇒	132	1000 ⇒	278	75000 ⇒	382
210 ⇒	136	1100 ⇒	285	100000 ⇒	384